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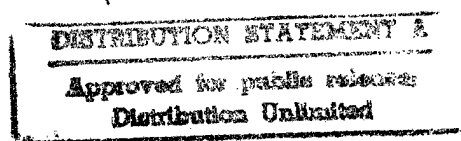
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20 January 1983

# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2359



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20 January 1983

## EAST EUROPE REPORT

### ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2359

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## INTERNATIONAL AFFAIRS

FINANCIAL, EXPORT STATUS OF AUTO FIRMS IN POLAND, ROMANIA, GDR

Paris LE NOUVEL ECONOMISTE in French 15 Nov 82 pp 64-71

[Article by Alain Jemain: "East Bloc Countries: Auto Rationing"]

[Excerpts] The great fear of "Red cars" burning out. The automobile has not had priority in Eastern Europe since 1975. Tractor trailers have been given preference.

As the saying goes in the German Democratic Republic, there are those who have the "3 G's," and those who don't. The three "G's" (Gluck, Geld, Genossen) are luck, money and contacts. Without these three magic words, the society of automobiles is not open to you--in the GDR as well as in other Eastern Bloc countries.

For the seven Warsaw Pact countries, all motor vehicles are luxury items that are not found beyond the restricted circle of privileged people of the "Nomenklatura." In 1980, a Zhiguli cost, in rubles and according to the model, the equivalent of 39 to 51 months' average wages of a Soviet citizen. A Polski 125, cost a Pole 62 months' salary in zlotys, and a Polonez with a more attractive body style cost 63 months' salary. Added to this, and at prices no less prohibitive, are gasoline (8 francs a liter for super in Czechoslovakia), spare parts and maintenance, and insurance premiums.<sup>1</sup>

Although "automobile fever" is still just as high, the crisis, which is as strong as in the West, and especially the shortage of foreign exchange, have forced the governments to take the automobile industry off the priority lists in their 5-year plans. In all countries without exception, the rate of growth of auto manufacturers has clearly slowed down since 1975-76. Today it is only 1.7 percent per year on average for the six producing countries. In the Soviet Union as in Czechoslovakia, and in the German Democratic Republic as in Bulgaria, preference is given to heavy trucks.

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<sup>1</sup> Mrs. Pascale Bastianelli, "Le Marche de la voiture de tourisme dans les pays de l'Est," ["The Market for Private Automobiles in the Eastern Bloc Countries"], COURRIER DES PAYS DE L'EST.

The result is that automobile production in Eastern Europe was limited to 2 million private cars in 1981 (France produced 2.6 million in 1981, 3.2 million in 1979). The Soviet Union (1.3 million or one-third less than the Renault conglomerate alone) is the principal manufacturer, followed at a considerable distance by Poland (247,000), East Germany (180,000) and Czechoslovakia (179,000). During the last decade, even the heirs of a long automobile tradition like Czechoslovakia (the firm Laurin and Klement produced its first car in 1905) and the German Democratic Republic (distinguished for DKW) showed a continuous decline in relative shares. From 1970 to 1980, the Czech share fell from 20 percent to 8.9 percent of the total output of private automobiles for the Comecon, and the GDR's share fell from 18 to 9 percent. Romania has been unable to take off (3.3 percent in 1970, 3.7 percent in 1981). At the same time, Poland has gained some ground, progressing from 9 to 12.3 percent (16.6 percent in 1979), while the Soviet Union has improved its position (48.6 percent in 1970, 66.2 percent in 1981).

The great fear of "Red cars" that plagued French, German and Italian manufacturers during the 70's has been burning out. Despite production increases in Denmark (9,500), Belgium (14,200), Finland (14,300), France (24,400), and Great Britain (26,400), vehicles from the East do not even account for 2 percent of new vehicles registered in the EEC.

"Tons of projects and thousands of contacts, but very little investment in the end during these past 7 years," noted a European expert. "The Eastern European countries, which thought they could escape the impact of the first oil crisis with their planned economies and good relations with the Middle East, launched gigantic plans to develop their automobile industry in 1973-1975. However, they felt the full force of the second oil crisis, and its multiplier effects were devastating."

Lacking resources, factories deteriorated further every year, and the cars became increasingly obsolete. No Japanese-style gadgets. No fabulous "CX's" (the coefficient of penetration in air). No electronic components on the dashboards or the power unit groups. But they did have thick carpeting, solid fixtures, and fool-proof anti-rust paint and protection. In 1977, Skoda requested French equipment to partially modernize its Mlada Boleslav factory. Renault supplied machine tools here and there to all the Eastern Bloc countries (except Poland). Fiat rationalized investments to a certain extent by developing a system of trade between Zastava (Yugoslavia), Lada (USSR), Polski (Poland) and Bulgaria. But the Skodas still have their engines mounted in the rear, as Dauphine and Coccinelle used to. The most recent Fiat-Polski, the Polonez, introduced in the summer of 1978, still uses the mechanical subframe of the Fiat 125. Exceptions to this practice are very rare. For a market which had at the time only the heavy English Range Rover, the Lada Niva, which seemed to have been designed solely by the Soviets, introduced a new concept of the "four-wheel drive." Built with the assistance of Fiat and with the idea of making it a pilot model, the Togliattigrad factory (with a capacity of 700,000 cars a year) has in recent years acquired automated and robot machines, particularly from Germany. It is neither Wolfsburg (VW), nor Mirafiori (Fiat), Douai (Renault), nor Zaragoza

(GM Spain), but--and this is not so bad--Flins or Aulnay. With less sub-contracting, a slower production pace (11 to 12 cars per worker a year) and, shifts on the production line.

Trade within Comecon--the common market of the Eastern European countries--is still at an embryonic stage. There is no integrated multinational development. National egoism has prevailed.

What are the dangers today of a new offensive? Very little, in all truth. The debt burden in Poland, Romania and the Soviet Union has forced these countries to pare down to the minimum. A number of bottlenecks prevent them from stepping up their plans. And above all, despite the undeniable competence of research workers in Czechoslovakia, Poland, the GDR and the Soviet Union, they lag so far behind technologically, that they can not catch up without the help of Western manufacturers. However, the latter are not ready to allow these countries to acquire the technology that will prevail by the end of the 1980's (electronics, aerodynamics, suspension, etc) without a serious quid pro quo. Simply granting licenses is out of the question, as this would only lead to technology transfers.

Peugeot, Renault, Volkswagen or Fiat, with 20 years' experience behind them, will require long-term assurances on large-scale assistance projects. It remains to be seen whether the time is ripe for projects of this scope.

#### One Percent of the Western Market

(Rate of penetration as a percentage of total vehicles registered)

	<u>1976</u>	<u>1980</u>	<u>1981</u>
Austria	1.7	1.4	1.6
Belgium	4	3.3	4
Denmark	4.2	7.3	13.1
Finland	16.2	15.8	13.6
France	0.9	0.9	1.3
Great Britain	1.5	1.6	1.7
Italy	0.2	0.1	0.1
Norway	2.6	3.3	4.3
Netherlands	1.6	1.5	1.8
Federal Republic of Germany	0.5	0.3	0.3
Sweden	0.9	1.8	1.8
Switzerland	0.7	0.7	0.5
Total	1.1	1.1	1.3

Source: Stock Exchange Committee of French Manufacturers.

## Soviet Union Strongly in the Lead

(Production of private cars in thousands of units)

	<u>1981</u>	<u>1980</u>	<u>1975</u>	<u>1970</u>
Soviet Union	1,324	1,327	1,201	344
Poland	247	351	164	64
East Germany	180	176	159	126
Czechoslovakia	179	183	175	142
Romania	75	88	68	23
Bulgaria	-	15	15	7
Total for Eastern Bloc countries	2,005	2,142	1,783	709

Source: National statistics and Stock Exchange Committee of French Manufacturers.

### Poland: Collapse

The cooperative arrangement with Fiat, begun in 1965 and reinforced in 1977, enabled the Polish automobile industry to take off. From 1975 to 1980, production more than doubled, going from 165,300 to 351,000 cars. In 1981, however, it collapsed, and production amounted to no more than 247,500 cars.

The two primary manufacturers, FSO and FSM, employed 67,000 workers up to last year. Since 1968, FSO (Fabryka Samochodow Osobowych) has produced four models of the Polski 125P in its Zeran factory near Warsaw (32,000 employees), under license from Fiat, and it has made the Polonez 1500 since the end of 1978, the body of which is a Polish design (five doors, on the 125P frame). FSO assembles parts imported from the Fiat 131 and 132, from Ritmo and Zastava 1100. Again under cooperative arrangements with Fiat, it delivers engines and gear boxes to Yugoslavia. The capacity of FSO was 160,000 cars a year before December 1981. Total output was estimated at 122,500 vehicles manufactured or assembled, three-quarters of which were exported. FSM manufactures small-engine vehicles (fourteen plants in Bielsko Biala and Tichy, 35,000 employees). Since 1957, it has produced the Syrena 105 and its spin-offs (Bosto light vans and the R20 light-weight commercial vehicles). Since 1973, it has also produced the Fiat 126P under a license from Fiat that was purchased in 1971.

Fiat Turin stopped producing the 126's in 1978 and, since then, has imported part of Poland's production. The millionth Fiat 126P left the factory in October 1981. Moreover, FSM manufactures engine units (300,000 in 1977), part of which are reserved for Fiat. The project prepared with the Turin group contributing the know-how to build the Fiat Panda (which was to replace the Syrena) was postponed.

In the present situation, there can be no valid production forecasts for the coming years. Before the recent "events," the target for 1985 was about

400,000 private automobiles. Only 55 percent of the 190,000 orders for 1982 could be filled. In compensation, the others will receive 10 percent interest on the payments made. Italy, the principal partner, receives more than 70 percent of the Polish cars sold on European markets, under cooperative arrangements with Fiat.

#### East Germany: Reduced Output

Since 1976, automobile production in the German Democratic Republic has declined considerably. It is increasing at only 2.1 percent a year now, as compared to 3.7 percent between 1971 and 1975. Thus, the GDR, which accounted for 18 percent of automobile production in the Eastern Bloc countries in 1970, only had a 8.3 percent share in 1980.

Since the two companies that manufacture private cars, Sachsenring Automobilwerke in Zwickau (Trabant) and Automobilwerke of Eisenach (Wartburg) have reached their full capacity, the East German government is forced to delay investments to this sector, in favor of furthering the industrial vehicle sector, which has higher priority. The unchanging Trabant with its plastic body (2 cylinders, 2 speeds, 600 cm<sup>3</sup>) is produced at the rate of 115,000 units a year. The Wartburg, based on the former DKW's (3 cylinders, 2 speeds, 1,000 cm<sup>3</sup>) is manufactured at the rate of 60,000 a year. These two models have been made for more than 10 years. The only improvements have been on the transmissions, carburetors and energy saving devices, in recent years. The only novelty is the convertible Tramp, which came out in 1979.

The GDR has for a long time tended to produce a number of popular cars, preferably using local components and parts. In June 1978 it asked Citroen to open a factory to manufacture Hooke's joints in Zwickau-Mosel, for an amount of 1.6 billion francs. This plant began operations at the end of 1981. When operating at full capacity, half of the 820,000 sets of joints it is to produce each year will be shipped back to Citroen in France. But who will absorb the rest of its output?

In November 1978, the Democratic Republic of Germany concluded an agreement with Czechoslovakia to set up, in Zwickau again, a factory to make 340,000 cars a year by 1984. The engines will be delivered by the Skoda factories. In 1980, East Berlin, which wanted to give priority to its truck industry, declared the project not viable. Will the Zwickau-Mosel Hooke's joints find themselves one day then on the Southeast Asian markets or in the United States (at Chrysler, notably)?

#### Czechoslovakia: At a Standstill

It is towards the very end of 1984 or the beginning of 1985 that the AZNP firm, which produces Skoda cars at Mlada Boleslav, 60 kilometers northeast of Prague (capacity: 200,000 cars a year), is supposed to come out with its first front-wheel drive vehicle. Most likely designed with the assistance of a European maker, this new 1,100 to 1,300 cm<sup>3</sup> model will nonetheless reflect the adoption by the Prague government of an investment program of a size that

has made it flinch ever since 1968. The last known attempt was made by Mr Vernier-Palliez, then president of the company, who suggested in 1979 that the factories in Mlada Boleslav be enlarged and modernized to manufacture a model based on the R9. It would have an original body and could be exported to the Comecon countries. But 2 years later, Czechoslovakia made it known that it had to adopt drastic measures to reduce its debt. The Vernier-Palliez project was therefore put on the shelf for an undertermined period of time.

The CAZ (Czechoslovakian Automobile Factories) industrial group, which supervises AZNP, has invested 1 billion francs every year since 1977 to modernize the painting, tooling and welding operations (with materials from Languepin, Sciatky and Ateliers mecaniques de Clichy). A new unit to manufacture the Skoda 120R coupe at Bratislava was built, with an estimated capacity of 60,000 cars a year by 1985 (4,000 at present).

In Northern Moravia at Koprivnice, the Tatra factories, also headed by CAZ, produce 3,000 units a year of the luxury model Tatra 613. It has a large air-cooled V-8 engine in the rear, and is purchased exclusively for official needs.

Czech production of private automobiles has stagnated since 1975. Despite an output of over 142,900 in 1970 and 179,000 last year, Czechoslovakia, which produced 20.2 percent of the automobiles in the Eastern European countries 12 years ago, makes less than 9 percent today. And here again priority has been given to furthering the tractor trailer industry. Great Britain, France and Finland receive most of the Skodas that go to the West.

#### Romania: Indicators

Thirty percent as compared to 300 percent: the rate of increase in private automobile production has been divided by ten. The Plan estimated production at 120,000 cars for 1981 (75,000 actually produced) and at 312,000 a year by 1985.

Operating since 1968, the factory at Pitesti, 120 kilometers from Bucharest, was built with the assistance of the Renault company and produces the Dacia 1300 and 1310, exact replicas of the R12. Discussions with Renault in 1972-74 to build the R5 came to an abrupt end. The master agreement signed in 1978, which doubled the production capacity of Pitesti by adding the R18 and a pick-up based on the R18, was at a deadlock, as was the contract signed in February 1979 for manufacturing and assembling in the same Pitesti plant the R20, at a rate of 1,500 a year.

Last October at the Bucharest Fair, after a 2-year delay, Romania introduced the Olcit, a 3-door model with a 650 to 1,100 cm<sup>3</sup> engine. The car was the first one to come out of the December 1976 agreement between Citroen and two Romanian government enterprises to build a large industrial complex at Craiova, with a capacity of 13,000 units a year. Averaging 180 million francs, it stipulated--and this was even the crux of the agreement--that Citroen would hold 36 percent of the shares in Olcit, a joint publicly and privately owned company which was to build the car of the same name.

Today everything is on ice. In mid-October Jacques Lombard, president of the board of the firm on quai Javel, sent a memorandum to the Romanian authorities asking them to review the entire contract. He expressed his regret that "the procedures for cooperation were not determined" when the contract was signed, which had caused an incredible waste of time and energy beyond all logic. The current investment is over 3.8 billion francs, instead of the 2.5 planned. True, it is partially compensated in the form of subcontracts with other French firms (tooling is 65 percent French, for instance); but supplies delivered and unpaid amount to 100 million francs (covered by Coface). Citroen estimates that it has incurred losses since 1978 "because of overly low prices for its supplies, as established in the initial contract." Their first memorandum to Bucharest in May produced no results, despite weeks of negotiations.

Buyers' credits for equipment and components put up by a banking pool headed by Credit Lyonnais and DREE (Directorate of Foreign Economic Relations) have been frozen since July 1982.

#### Bulgaria: Diktat

Bulgaria stopped all automobile production in 1969, just after the "Prague Spring." Since the much too competitive structures chosen by the Sofia authorities were in danger of spreading--particularly to Czechoslovakia--the Soviet big brother put a stop to it. The Renault firm was compensated at the time, "down to the last screw," in view of its contract with Bulet (assembly plant at Plovdiv to produce 15,000 R8-R10 and Alpine Renault's a year), as was Fiat, which was associated with Balkancar in the Sofia suburbs.

The only factory remaining--and producing at a slow pace--was in Lovetch, 110 kilometers north of the capital, where Moskvitches were made, at a rate of 15,000 a year, with parts from the Soviet Union. Now the Bulgarian industry is confined to merely shipping to the Togliattigrad factory (in the Soviet Union) automobile parts, starters, distributors, coils and filters, and to producing limited quantities of the hardy Estafette and a 4" x 4" for farm use.

#### Hungary: Allergy

This is the only Comecon country allergic to the automobile. Hungary neither produces nor assembles any private cars. It does, however, manufacture parts (mechanical parts and electrical equipment) and sub-units--of a high quality, say Western observers--which are exported to the Soviet Union and Poland.

In 1980, the Budapest authorities authorized the import of 109,000 automobiles, 48,200 of which came from the Soviet Union, 40,400 from the GDR, 10,250 from Czechoslovakia, 6,400 from Poland and 3,500 from Romania. The rest, a very small number, came from Western countries. This year, 234,000 Skoda (Czechoslovakia), Lada (Soviet Union) Trabant and Wartburg (GDR), and 37,500 Fiat Polski are to be imported.

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## INTERNATIONAL AFFAIRS

### SHEEPBREEDING, WOOL PRODUCTION TRENDS IN CSSR, GDR

Prague NAS CHOV in Czech No 11, Nov 82 pp 467-469

/Article by Eng Vaclav Svec, CSR Ministry of Agriculture and Food: "Wool Production in CSSR and GDR"/

/Text/ The highly topical problem for our national economy is utilization of our own base of raw materials. It is one of the basic prerequisites for implementation of the Set of Measures for Improving the Planned Management of the National Economy.

In Czechoslovakia, there are extensive regions suitable for sheepbreeding which could become a source of raw material, sheep's wool, which we otherwise import from nonsocialist countries at considerable expense.

Even though there occurred a tremendous increase in availability of synthetic fibers over the past several decades, wool still maintains its solid position on the world market and remains an indispensable raw material for the textile industry. Due to its specific properties, it is not fully substitutable by other types of fibers and is designated in world trade as a strategically important raw material.

The Czechoslovak wool industry processes annually approximately 20,000 tons of basis scoured wool. More than 90 percent of the overall volume of processed wool is constituted by imports, primarily from capitalist countries. Domestic production covers only about 10 percent of the wool industry's total consumption.

Our country spends annually more than Kcs 1.5 billion in "all charges paid" prices for importation of wool. At the current numerical state of 960,000 sheep, domestic wool production represents a saving in imports of over Kcs 100 million in the same prices. With the high demand importation of wool poses on foreign-exchange resources, we must endeavor to achieve as economic a utilization of this raw material as possible and attempt to increase domestic production in the quality grades required by the wool industry.

The key countries for importation of wool into the CSSR in the area of fine- and medium-quality wool are Australia with approximately 7,300 tons (basis scoured), South America with 3,500 tons, New Zealand with 2,700 tons and, in the area of coarse wool, the USSR and Mongolia with 1,300 tons.

Worldwide availability of wool is and will remain limited. The potential for increasing wool production has been almost exhausted in the key producing countries and the production of greasy wool is shifting to nontraditional areas.

All socialist countries endeavor to make their domestic wool a more significant component of their wool industry. For example, domestic production in Bulgaria amounts to 90 percent, in Rumania to 85 percent, in the USSR to 63 percent and in the GDR, which with its natural and breeding conditions comes the closest to our republic, 32 percent of overall wool consumption.

Of importance to the processing industry is also the assortment composition of domestic wools. Availability of wool in the CSSR according to assortment is shown in Table 1.

Table 1. Wool Assortment Composition in the CSSR

Year	<u>fine</u>		<u>medium</u>		<u>coarse</u>		<u>Total</u> tons
	tons	percent	tons	percent	tons	percent	
1970	1,209	61.5	386	19.5	370	19.0	1,965
1975	947	56.0	335	20.0	398	24.0	1,680
1980	1,090	55.0	487	24.5	413	20.5	1,990

Table 1 makes it clear that the share of fine wool in total domestic wool production is approximately 55 percent. It must be objectively admitted that domestic fine wools do not match the quality of fine wools from overseas, which is primarily a consequence of natural conditions. The major part of our fine-wool production to date has found application in carding which, however, has a limited potential for production as well as consumption. The objective of the improved breeding program is to produce merino sheep with somewhat coarser wool. To that end has been implemented a new system for assessment of breeding sheep and rams with the objective of achieving assortment rating AB - B. On the other hand, individual animals from the Wallachian and Bohemian Forest sheep herds are eliminated if their wool is too coarse.

Most viable for the wool industry are primarily semifine wools produced by North Caucasian and Corriedale sheep. The achieved results in chemical and physicomachanical tests on fibers correspond to those of South American and New Zealand wools. Their primary application is for semiworsted yarn.

Nevertheless, the new trends in breeding are not matched by pricing policies which, despite all allegations of the wool industry about the need for coarser wools, still prefer fine wools to the detriment of breeders of herds with coarser wool. This leads to a confrontation of the goals implemented by the breeding service and the financial interests of agricultural enterprises.

An important task is reduction of contamination of domestic wools by impurities. The procured domestic greasy wool is often contaminated and contains a high percentage of admixtures of plant origin. Processing of such wool poses increased demands on scouring and carbonization. A high percentage of mineral substances is also marked by high dust contents that exceed a justifiable limit.

## Sheepbreeding in the GDR

To facilitate comparison, I intend to deal in this article in closer detail with the situation of sheepbreeding in the GDR which has an analogous industrial structure and conditions for animal production.

Table 2 shows that in the years 1970 through 1980 the number of sheep increased 31.4 percent in the GDR while it decreased 7.25 percent in the CSSR.

Table 2. Comparison of Developments in the Number of Sheep from 1970  
(in 1,000 of animals)

<u>Indicator</u>	<u>Year</u>					
	<u>1970</u>	<u>1972</u>	<u>1974</u>	<u>1975</u>	<u>1978</u>	<u>1980</u>
CSSR	981	889	811	805	841	910
GDR	1,598	1,657	1,847	1,883	1,965	2,100
Index CSSR/GDR	61.4	53.7	43.9	42.7	42.8	43.3

The number of sheep kept per 100 hectares of agricultural land in 1975 (in 1980) was 29 (32) in the GDR, 12 (13.6) in the CSSR and 6.7 (7) in the CSR.

An outline of wool production per sheep in kilograms (basis scoured) is shown in Table 3.

Table 3. Outline of Wool Production Per Sheep (Basis Scoured) in kg

<u>Country</u>	<u>Year</u>					
	<u>1970</u>	<u>1975</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
GDR	2.07	2.47	2.61	2.68	2.74	2.62
CSSR	2.02	2.06	2.11	2.17	2.26	2.19

Domestic grease wool in the GDR is supplied by both the socialist and the private sector. Table 4 shows that the share of small breeders in the GDR is increasing.

Table 4. Share of the Socialist Sector and of Small Breeders in Supplies of Grease Wool in the GDR (in percent)

<u>Year</u>	<u>Socialist Sector</u>	<u>Small Breeders</u>
1972	80.36	19.6
1975	80.69	19.3
1977	76.73	23.4
1979	73.07	26.9

The socialist sector in the CSSR breeds approximately two-thirds of sheep, the private sector about one-third. The ratio is reversed in the CSR: one-third in herd keeping and two-thirds in small-scale breeding. The GDR ratio of individual sectors is similar to the SSR where 80 percent is accounted for by the socialist sector and 20 percent by small breeders.

For these reasons, the economic stimuli as well as the economic results in sheepbreeding in individual countries widely differ. To facilitate comparison, I present an example of the price relations in deliveries of merino sheep wool staple which qualitatively corresponds to our merino sheep wool, procurement class Ia.

The basic price for annual deliveries of basis scoured wool up to 4,000 kg is M 62, i.e., Kcs 186 (our Ia is Kcs 292).

For deliveries in excess of 4,000 kg of basis scoured wool the basic price is M 62 plus a 15 percent premium of M 9.3 and another 10 percent premium for merino M 6.2 amounting to a total of M 77.5, i.e. Kcs 232.50 (our Ia being Kcs 292). Transfer price for industry is M 30, i.e., Kcs 90 (our Ia is Kcs 68). The state subsidy up to 4,000 kg is M 32, i.e., Kcs 96. State subsidy beyond 4,000 kg is M 47.50, i.e., Kcs 142.50 (our Ia is Kcs 224).

The procurement price for amounts in excess of 4 tons in comparison to the transfer price for the industry in the GDR amounts to 258.3 percent.

In regard to meat utility value, the average price of lambs for slaughter is M 6, i.e. approximately Kcs 18 per kg of live weight, while in our country the average price ranges around Kcs 27 per kg of live weight.

From what has been said, it is obvious that procurement prices for sheep's wool in particular are substantially higher in our country than they are in the GDR, and yet they do not provide a sufficient incentive to agricultural organizations for accelerating the development of sheepbreeding. However, sales receipts in the GDR cannot cover the production costs.

The key motivation for the favorable development of sheepbreeding in the GDR is the fact that the state plan obligatorily stipulates and assigns down to the production unit level:

--total number of sheep, specifying the number of ewes,

--production of wool, basis scoured,

--production of mutton through slaughter

--apprentice acquisition plan, approximately 200 apprentices annually for the entire GDR.

From the production figures listed in Table 5, the GDR used in 1979 in production of worsted yarn a total of 582.5 tons of basis scoured wool, i.e., 10.7 percent, of which quality grade 60s accounts for 59.8 tons, 58/60s 134.2 tons, 56/50s 58.0 tons, 50s 3.7 tons and 48/40s 326.8 tons.

Table 5. Comparison of the Assortments of Wool Produced in Both Countries

Wool	GDR		CSSR	
	tons	percent	tons	percent
Fine	2,471	45.3	1,090	54.8
Semicoarse	2,345	43.0	487	24.5
Coarse	639	11.7	413	20.7

Wool deliveries for combing in the CSSR amounted in 1979 to a total of 175 tons of domestic basis scoured wool, 64/60s, i.e., 8.93 percent.

At today's worldwide prices of sheep's wool the domestic production of wool in the GDR represents approximately Kcs 280 million in all charges paid prices, in the CSSR approximately Kcs 100 million in same prices.

Production of sheep for slaughter represents in the GDR approximately Kcs 586 million in all charges paid prices, in the CSSR about 218 million in the same prices.

Availability of sheepskins from domestic production represents in the GDR about Kcs 65 million in all charges paid prices, in the CSSR approximately Kcs 27 million in the same prices.

Production of loaf cheese in the CSSR represents a contribution of approximately Kcs 110 million in all charges paid prices. Sheep are not milked in the GDR.

This comparison of production relevant to the individual sheepbreeding systems indicates different trends in their development.

Further numerical increases of sheep in the CSSR depend on the assessment of the viability of their breeding primarily by departmental and supradepartmental planning units.

8204

CSO: 2400/88

KAROL MARTINKA VIEWS SLOVAK ECONOMY 5-YEAR PLAN

Prague RUDE PRAVO in Czech 1 Dec 82 p 2

[Article summarizing report presented by Comrade Karol Martinka]

[Text] An analysis of economic development in the first years of the Seventh 5-Year Plan justifies a positive evaluation of the sincere efforts of hundreds of thousands of employees, workers and technicians in the overcoming of the consequences of more difficult conditions, toward higher quality work and greater efficiency. At the same time, this analysis commits all of us not to stop in midstream, not to lessen the demands on ourselves and on others, because the current sophistication of work at many locations and in many sectors is still not commensurate with future objectives.

In the plan for next year this requires the assurance to a substantial extent not only of a qualitative increase in public production, but also and more importantly an increase in its effectiveness. And it is right in this area that an important qualitative change is occurring in the development of the national economy in Slovakia. While in terms of the development of public production for 1983 in industry, agriculture and construction, Slovakia is to account for 36.2 percent of the projected nationwide increase in production, we face the objective on the qualitative side of implementing more than 41 percent of nationwide national income formation for next year.

To foster these objectives, the 1983 plan projects a more efficient utilization of the developmental prospects of Slovakia to speed up the increase of material production. While retaining the current significant differentiation in the growth rates of individual production sectors and fields, this is to bring about an increase in social product formation of Kcs 8.3 million in comparison with 1982.

These projections assume an intensification of structural changes in industry, construction and transportation with a focus on more efficient utilization of energy and material resources, and on the fulfillment of pressing national economic projects.

We are orienting production toward an assurance of balance on the domestic market, not only in the aggregate, but also in the structure of deliveries of goods, with a view to the development of consumer demand.

We are laying the foundation for an assurance of foreign commercial relations in accordance with the 5-year plan.

While reducing the volume of construction, we are implementing qualitative changes in investment, a more significant activization of resources which have already been expended, a continuation in the reduction of the excessive number of noncompleted construction projects, and the further shortening of construction schedules.

We are linking the development of material production to a comprehensive increase in efficiency and to a strengthening of a regime of strict economization in the nonproduction sphere. We are emphasizing the further development of existing findings in the valuation of material inputs and in conservation measures in materials consumption. We are presuming that there will be an intensive mobilization of sources of increased labor productivity and that a turnaround will be achieved in the development of wage intensiveness.

This is why concrete objectives have been established in the plan and in the measures for its assurance.

In these ways we are striving to create the material conditions for the realization of the ongoing major objectives of the economic and political policies of our party. Money incomes and their coverage in goods are forming the basis for an increase in personal consumption in 1983 of 2.2 percent in comparison with 1982, thereby maintaining it, on a per capita basis, at the 1980 level. We are planning to complete more than 39,000 apartments and to expand water management facilities, both of which, in conjunction with preschool, nonschool, health and social services, will make possible a partial increase in the quality of the living conditions of many of our fellow citizens.

A critical place in the development of material production will continue to be filled by industry, within which we will continue to pursue a restructuring leading to a higher valuation of raw materials, other inputs, and energy, a more efficient implementation of research and development results, and a more complete integration into the international division of labor.

On this basis, we are projecting an increase in industrial production of 3.3 percent next year, which represents a significant acceleration of the pace of the previous 2 years.

General engineering is to continue to be the sector determining the industrial growth rate. Its production is to increase by 7.5 percent, and within this sector there is to be an 8.5 percent increase in the

production of the electrotechnical industry. In these areas we are to achieve about 40 percent of the increased production of the entire Czechoslovak general engineering sector and roughly 60 percent of the increase in industrial production in Slovakia.

In the interest of supplying the market with foodstuffs, Comrade Martinka continued, we are placing great emphasis during the 5-year plan on overcoming several developmental imbalances of long standing between plant production and livestock production, with the objective of producing adequate amounts of domestic fodder of the requisite quality and in the desired structure.

However, the successful completion of tasks will depend on the abilities of agricultural enterprises and the managerial sphere to make use of the findings of progressive operations, to take full advantage of bulk fodders, to create the conditions for an increase in their quality and for their processing and, in conjunction with the rational utilization of concentrated fodders, to achieve a 3-4 percent reduction in fodder utilization in comparison with orientational norms without reducing the use values of livestock, thereby also assuring the conditions for a smooth transition to new crops.

An increase in our self-sufficiency in grain production is directly connected with the assurance of the requisite amounts and, primarily, quality of bulk fodders. The task we are setting ourselves for next year of producing 4.6 million tons of bulk fodder in the form of hay is feasible, being the level we achieved in 1980. We must continue to orient ourselves to an increase in the intensity and an improvement in the structure of feed crop plantings in the direction of perennial fodder crops and feed root crops. Our task is to increase, in the shortest possible period of time, the area sown in perennial fodder crops to 17-18 percent, thereby mobilizing our own resources to generate the production of feed proteins. Also particularly pressing is a reduction of excessive losses in volume and quality during harvesting, treating and storing, which estimates indicate reduce the fodder base by 30 to 40 percent. It is within our reach to reduce these losses in the immediate future by 10-15 percent.

Important resources for growth, Comrade Martinka continued, for a greater degree of needs satisfaction and for increased efficiency are those resources which are expended on capital asset replacement. Nationwide, we continue to devote 29 percent of total utilized national income to this purpose.

In accordance with the tasks of the 16th Congress and in conjunction with results which have been achieved, we are implementing a sharper transition to the intensive utilization of capital assets, consisting primarily of a concentration of forces and assets on the completion of construction projects, shortening construction schedules and reducing the number of noncompleted construction projects.



In view of the available materials and facilities, we must assure these critical objectives while further reducing overall investment volume.

In another portion of his speech, Comrade Martinka concerned himself with ways of increasing economic efficiency. He noted as critical efforts toward a high degree of managerial effectiveness, an attitude of conservation and purpose in the expenditure and consumption of material assets in all spheres and at all levels of management, toward increased product quality, labor productivity, the utilization of all intensive factors and of the results of the work of the research and development base. Likewise essential is the more effective integration of the economy of the SSR into the international division of labor within the framework of the CEMA.

A critical factor in an increase in personal consumption, continued Comrade Martinka, remains an increase in 1983 retail turnover of 2.5 percent.

It is projected that resources devoted to the development of social consumption will increase by 3.1 percent in comparison with last year.

We are in the midst of a struggle for the realization of the very demanding program of the economic and social policy of the party, as outlined by the 16th CPCZ Congress, he further noted. We are implementing it under more complex conditions and in a struggle to overcome our own weaknesses and shortcomings.

Fulfillment of the objectives and tasks of the plan will not be foregone conclusion, but a difficult, creative process requiring a concentrated effort by everyone, even during this preparatory period of its formulation and in the course of its implementation at the very beginning of the coming year.

Plan formulation cannot be a merely administrative matter and cannot be accomplished solely through economic analysis, but is also a responsible political task, whose purpose is to convince every member of society of the necessity of the established tasks and of the ways to their realization, of the necessity for giving priority to public interests, of the link between work performance and the satisfaction of increasing needs.

The qualitatively new tasks of the intensification of economic development, the need for a thorough assertion of public interests with a concurrent and essential increase in activity, initiative and independence at all levels of management urgently requires the further strengthening and deepening of the leadership role of the party in the economic area, a further increase in the effectiveness of its work and its capacity for action.

9276

CSO: 2400/92

BENO STRESSES LEADING PARTY ROLE IN PLAN FULFILLMENT

Prague TRIBUNA in Czech 8 Dec 82 pp 1, 3

[Address by Mikulas Beno, secretary of the CPCZ Central Committee, at the seventh session of the Central Committee]

[Text] The draft of the state plan for 1983 sets for us mobilizing tasks that are by no means easy. Undoubtedly, the Communists will lead the struggle for their realization. Further intensification of the party's leading role, of its organizing and controlling functions, is one of the main prerequisites for expanding the principal factors of intensive economic development, on which the plan for next year and the subsequent years of the 7th Five-Year Plan is based.

Everyday practice confirms how much depends specifically on whether the party organs and organizations correctly direct their efforts in accordance with the basic requirements of the social and economic program, so as to adopt the most effective approach conforming to the conditions and prerequisites for achieving the set objectives, to make the force of deep conviction and of effective political leadership, organization, education and control the pressure for their fulfillment, and to actively include the working collectives in the development of the workers' initiative. This unquestionably will continue to place great demands on all Communists, especially on the party cadres and the top officials in all areas of our society's life.

To implement next year and in the years thereafter the directives of the 14th party congress will require intensified effort everywhere. It will be necessary to thoroughly adopt, and also to fully apply in practice, the principle that the state plan is a program of the party and of the workers' mobilization. Effective political work will have to be directed more decisively toward ensuring that the correct conclusions and resolutions of the Central Committee regarding efficiency, quality, and orientation on the economy's intensive factors, and on the requirements of discipline and responsibility, are converted into specific programs at each plant and every organization.

Practice likewise confirms that it is important for the collectives to know their specific tasks, and also how to fulfill them. The thorough ensuring of the economic and social policies set by the 16th party congress, and elaborated in the presented draft of the Czechoslovak state plan for 1983, is the unifying content of party work and the criterion of the Communists' activity in all areas of our society's life.

In the resolution of the Central Committee's Presidium, which is included in the supporting material distributed to Central Committee members and alternate members, the substantive, personnel and organizational preparations for the annual membership meetings and party conferences are likewise conceived in this spirit.

The main purpose of these important party proceedings will be to mobilize all forces within the party, and the wide strata of workers, for the struggle to implement the policies set by the congress and to fulfill and overfulfill the tasks of the plan. Meaningful and critical evaluation of the work and results in fulfilling the previous tasks, and the elaboration of methods and procedures for the coming period must likewise serve this purpose.

The information to date indicates that the kraj and okres party committees, and gradually also the party organizations, are approaching with responsibility the preparations for the party members' annual proceedings. But it remains important to ensure everywhere that the preparations and the course of the proceedings be imbued with the spirit of high standards, adherence to principles, criticism and self-criticism, with a high sense of party responsibility, so that evaluation of the work performed and the setting of further tasks reflect the present and also the long-term needs of our society's development, particularly of its social and economic development.

In developing the struggle for the economy's faster changeover to the path of intensive development under difficult conditions, we are especially aware of how directly the series of specific and substantive measures contributes toward changing the people's thinking, and of the fact that the objectives and goals can be achieved only through their conscious and purposefully organized activity. At the fifth session of our Central Committee, Comrade Gustav Husak again emphasized the unity of organizing and educational activity, with these words: "In our entire work it is essential to bear constantly in mind that we must make the millions of workers interested in the fulfillment of the tasks confronting us, so that they understand how things stand, that they are ensuring their own standard of living and the development of our country."

This is why so much emphasis is again being placed also at today's session of the Central Committee on developing an effective political struggle for the plan's goals, so that the key to their realization will become the everyday offensive political activity of the party organizations and of all Communists among the workers. Eighteen months after the 16th party congress, the party organs and organizations, and the Communists in the individual areas are intensifying their efforts for the more consistent practical implementation of the party's economic policy.

More and more collectives of workers are adopting increased tasks, and the socialist competitions are producing many good results. It is becoming apparent how important it is to give this movement a mass character, to intensify its orientation toward supporting the principal tasks, and to achieve that the party organizations and working collectives overcome with even greater determination the shortcomings and difficulties that are sapping our strength in this struggle. This is the more urgent because not all party organizations and Communists are fighting equally consistently and with the same dedication for the realization of the adopted measures. This again confirms the exceptional

timely significance of care for the party, for a high degree of the Communists' activity, for purposefully increasing the effectiveness of organizational and educational work, and for upgrading the party's membership base.

All the kraj and okres party committees, and most of the local party organizations have already adopted their own specific measures incorporating the resolutions of the Central Committee's third session that elaborated the conclusions of the 16 CPCZ Congress. Thanks to the attention devoted by the party organs and organizations, the favorable development of the membership base after the 16th congress is continuing. The qualitative aspects of forming the party's ranks, in accordance with the requirements of strengthening the party's leading role, are being applied successfully. Our party is developing in accordance with the conclusions of the 16th party congress.

On 1 October, the party had 1,584,011 members and candidates for membership. The party's numerical growth is continuing, and the class, social and age structure of its membership is improving. Of the 100,165 candidates accepted since the 16th party congress, 60.3 percent are blue-collar workers, 6.7 percent are members of unified agricultural cooperatives, and 23.3 percent are intellectuals, including 3 percent who are students. It can be said that there are Communists in practically all key posts and at every workplace.

We have been successful in gradually implementing the principle that the really thorough and permanent strengthening of the party's ranks cannot be achieved in an isolated manner, but only as a part of the organizing and educational activity of the local party organizations and working collectives. However, these favorable trends cannot mask certain shortcomings. The differing level in upgrading the party's membership base concerns mainly its lack of comprehensiveness. We have in mind ever-greater care for the quality of those who are being admitted into the party's ranks, for the education of candidates for party membership and of the young members, and simultaneously for ensuring that constant attention is being devoted everywhere to the ideological, political and class formation, activity and fighting spirit of all Communists, of the membership base, in their everyday struggle for the realization of party policy. The questions of care for the party will unquestionably figure prominently in the proceedings of the coming annual membership meetings and party conferences.

The successful fulfillment of this important intraparty task is linked directly to the growing ability of the local party organizations to take action. Without their increasing activity, it would be difficult to strengthen the party's ability to carry out its policies. It must be regarded as favorable that lately the kraj and okres party committees, in accordance with the requirements of the 16th party congress and the general orientation of the Central Committee, have clearly been devoting more attention to increasing the role of the local party organizations. For this orientation toward the basic link in the party structure we have a good background in the vast experience of our party, of the Soviet Communists and of the Communists in the other fraternal countries who are devoting close attention to this key issue in the course of fulfilling the conclusions of their respective party congresses. We are becoming systematically convinced about the soundness of this orientation. I will mention at least the exchange of party membership cards, the preparations for the 16th party congress, and the elaboration and gradual implementation of its conclusions. The soundness of this orientation has been confirmed also at the political and organizational

conference of the secretaries of the fraternal countries' party central committees, held in Prague at the beginning of this year, at which the developed system of care for increasing the effectiveness of the CPSU local party organizations attracted special interest.

Constantly in the forefront of attention in the efforts to ensure the ability of our party's more than 46,000 local organizations, and to increase their influence in all areas, is the question of perfecting the entire mechanism of their management. We know very well how important are the wide party aktiv and the everyday care for their political maturity and all-round preparedness. The committees of the local party organizations alone represent an aktiv nearly 300,000 strong. It decisively influences the party's life, the ideological and action unity of the party's rank and file.

It is favorable that the political maturity, professional qualifications, dedication and also the organizing ability of this party aktiv are improving systematically. More than 60 percent of the chairmen of the local party organizations have completed higher levels of party education. This is a good prerequisite for ensuring the tasks that we are discussing today. But we must take into account that within the party committees there are fairly many young members who joined the party during the past decade, and who only now are gaining gradually the practical and party experience, and the necessary political training. We must devote even more care to leading, teaching and testing in practice this basic stock of party cadres, so that they may penetrate the essence of the problems, see the domestic and external interrelations in their entire breadth and become aware of the urgency of all steps toward the clear implementation of the party's strategic course.

Everyday practice confirms that it is particularly important--especially under the complex conditions of realizing the economic and social program--for the local party organizations, and for the party aktiv heading them, to help even more conspicuously than up to now, through their everyday commitment to party policy, in creating a favorable political and working environment at the workplaces, in performing more fully their role as the political core of the working collectives.

There is no substitute for live political influence, education and conviction as the main method of political management. Our party organizations are broadening their knowledge of the collectives' life and work. They are becoming involved more comprehensively in problems related to the solution and ensuring of labor questions. Examples of creative work and of an economical attitude to national property are multiplying. All this will now have to be developed further in the struggle for the fulfillment of our present tasks, and it will have to be utilized even better in the active political and ideological formation of the working collectives and of their attitude to work.

For we still encounter an administrative and formal approach to work, to the breakdown or ensuring of the state plan's tasks. The necessary support is sometimes lacking for the new and progressive solutions that aim with initiative for the utilization of internal reserves and resources, which is evident already from the different results of economic activity under comparable conditions, from the results of applying to practice the advances in science and

technology, and from perfecting the entire sphere of management through the comprehensive application of the Set of Measures. In their daily contact with workers, it is essential that Communists, officials and managers explain the present tasks, solve the needs of the working collectives and mobilize them for the fulfillment of the goals set by the plan. Where else but specifically at the annual membership meetings of the local party organizations is the right place to present all these important questions, very seriously and to the point.

Linked to this is the very timely requirement of conspicuously improving party control at every workplace. It is demonstrated to us daily what great force party control represents in the fulfillment of party resolutions, in developing greater activity and responsibility for the fulfillment of the assigned tasks, and in the struggle against indifference, violations of discipline and other abuses. The local party organizations must play an outstanding role also here. They must make better and more consistent use of the right to control, especially through greater emphasis on the qualitative aspects of plan fulfillment, by promoting effectiveness, quality and strict economization. Practice shows that, in spite of the favorable results, there is still much to be done for the party organizations to adopt in their control activity approaches that strive to utilize extensively the experience and initiative of the people and to solve more decisively the economic plan's tasks in accordance with the needs of society as a whole, approaches that increase the efficiency of the managing organs and strengthen the unity of the party, state and economic management's course of action.

The requirement to develop the local party organizations' effectiveness and their ability to take action increases further the party organs' role in managing them, and the significant place of the party apparatus in ensuring and controlling the party resolutions, in asserting Lenin's work style, and in providing effective assistance to the local party organizations. Therefore also the Central Committee Secretariat is setting ever-higher requirements for the formation of a highly qualified and effective political apparatus of the party, and of the okres party committees in particular. It is important to bear in mind the requirement of the 16th party congress that managing activity, especially that of the okres party committees, concentrate on developing live and direct contact with the local party organizations and their aktiv, on intensifying an individual approach to them, and on increasing its purposeful and qualified assistance on the spot. It is likewise desirable to overcome more decisively any manifestations of formalism in party work, and of course not only there.

The point is never to be satisfied with, for example, "the resolution was discussed" or "the planned actions were realized," etc. It will be appropriate to achieve everywhere what the Central Committee has repeatedly emphasized: that the main criterion of the effectiveness of our work must become the actual fulfillment of the tasks and active solution of the problems.

In conjunction with the tasks we are considering at today's session, I would like to dwell briefly on cadre work, on the political guidance and training of cadres. More timely than ever before is the congress conclusion that the coming period will further increase the requirements that top cadres must meet, regarding their ability to manage, lead, educate and organize the workers for the fulfillment of our party's economic and social program. Cadre preparations

for the annual membership meetings and party conferences also are oriented in this direction, to ensure that for election to the party committees there will be nominated Communists who have proven themselves in the struggle for the realization of party policy, who have demonstrated that they have the requisite fighting spirit and organizing ability, and who are consistently promoting the needs of society as a whole.

Daily we encounter proof that the qualities of people as the organizers and educators of the working collectives, their ability and initiative in finding progressive solutions to many of the questions associated with the effectiveness of economic activity, manifest themselves specifically under the more difficult conditions.

This has been confirmed also by the results of the evaluation of top officials in state and economic administration, which the Presidium of the Central Committee considered recently. The party organs and organizations have done outstanding work in realizing the objectives and purpose of this evaluation. This has contributed toward increasing the responsibility of the overwhelming majority of top officials for the fulfillment of the tasks, toward uncovering numerous reserves, and toward the more effective solution of the weaknesses and shortcomings in the appropriate areas.

Despite the higher standards in the evaluation of results, however, practice shows that in some areas this activity is not always regarded as effective work with people, and requirements corresponding to the present tasks are not always the main criterion. A harmful tolerance and cautiousness are evident, from which stem the lowering of standards for the cadres, uncritical apologizing of shortcomings, etc. That does not contribute toward supporting the efforts of top officials to seek new possibilities for upgrading managerial work.

The care for cadres is reflected also in their faster political training and professional qualifications. It should be emphasized that a rise of the educational level is an important prerequisite for holding office. But at the same time, within the entire system of cadre and general party work, far more attention must be devoted to ensuring that these prerequisites for top cadres within the individual areas and levels of party, state and economic management manifest themselves more clearly in practice, in the specific performance of managerial activity, in the initiative and creative approach to the solution of problems, so that everywhere the tasks confronting us are tackled more forcefully, with a healthy dissatisfaction with the results of our own work.

Herein lies today also the essence of the approach that must be characterized by a high sense of responsibility for the realization of the party's economic and social program; expressed in a more decisive assertion of the intensifying factors. Hand in hand with this it is necessary to develop in every official a responsible owner's attitude at his workplace, the working man's pride in the fruits of socialism, and his conviction that our struggle is a just one.

The preparations for the annual membership meetings and party conference tie in with the efforts to date to implement the conclusions of the 16th CPCZ Congress and the resolutions of the Central Committee. This will be more than merely an important intraparty event. The purpose of the annual membership meetings and

party conferences will be to combine, at every level of party management, the party's will with the workers' inexhaustible energy in the society-wide struggle for the fulfillment of the set tasks. From this point of view everything possible must be done to ensure that the organizational and cadre preparations for the annual proceedings of the Communists provide a good start into the next period of realizing the conclusions of the party congress.

1014

CSO: 2400/100



LACO DISCUSSES PROPOSED AMENDMENTS TO ECONOMIC CODE

Prague HOSPODARSKE NOVINY in Slovak 10 Dec 82 pp 1, 8, 9

[Article by Karol Laco, CSSR deputy premier: "In Accordance With Present Requirements"]

[Text] The requirement to perfect the planned management of the economy is one of the main ideas contained in the conclusions of the 15th and 16th CPCZ Congresses for the socialist state's economy-organizing function and for the discharge of this function. Specification of this function is not a one-shot affair. It figures prominently in the everyday managing activity of all links of the economic mechanism. The 16th CPCZ Congress confirmed the political and economic significance of the Set of Measures for Improving the Planned Management System of the National Economy and at the same time ordered that it be developed further creatively. In a programmed and systematic effort to elaborate and implement the conclusions of the 16th CPCZ Congress and of the approved principles of the Set of Measures, the government is devoting full attention to all elements of the system of management, with special emphasis on perfecting national economic planning and the processes associated with it. This effort includes also the perfection of legislation. A result of perfecting economic legislation is, among others, a government-proposed bill to modify and amend the Commercial Code. Consideration of this bill is on the agenda of the December joint session of both houses of the Federal Assembly.

The drafting and adoption of this legislative measure fall in the period of building a developed socialist society, in which the economy-organizing role of the socialist state is being strengthened and the socialist legal system --in accordance with the realization of the principle of the Czechoslovak Communist Party's leading role--necessarily and naturally has an organizing and regulating role especially in the realization of the party's economic policy and in influencing the economic processes of society.

A requirement for the socialist legal system is that both this system as a whole and its individual legal norms positively influence the development of a socialist society, that they start out from the needs of this development and respond to it in every respect in the role of a positive factor. Another requirement

that the socialist legal system must meet is stability. Admittedly, relative stability. Stability of the laws and legal norms is necessary and important, but it cannot mean that also the statutory regulations must be valid and enforced that have come into conflict, partially or entirely, with the objective processes, with the socioeconomic development and its needs, no longer conform to this development and, instead of supporting and favorably influencing it, are becoming its obstacles. When legal norms come into conflict with the needs of society's development and cease to fulfill their active role, they must be changed and amended or replaced with new ones, in due time and in the appropriate manner. If the legal norms, as a part of the superstructure over the economic base, are to fulfill their mission, they must satisfy the timely needs and tasks, and also the long-term objectives.

The requirement to modify and amend the Commercial Code and to strengthen its active organizing and guiding role in the regulation of economic relations did not arise overnight. Since the early 1970's, the CSSR Office of the Chief Arbitrator has been studying the sociopolitical impact of business laws. Other organs also surveyed the effect of the legal norms of this type, gaining information and experience as to how they functioned. The results of these studies and surveys then served as background material for the adoption of statutory regulations in this field under the 5th and 6th Five-Year Plans. They also provided arguments for conclusions regarding the viability of the Commercial Code's concept. They proved that especially under the 5th and 6th Five-Year Plans the Commercial Code still remained a significant factor and was an applicable instrument of economic relations.

Under the 7th Five-Year Plan, however, the situation is different. The timely conditions and needs have raised a need which means that the forms in which the statutory provisions of business law have been perfected since 1970, mostly at the level of statutory regulations below the status of laws and through partial modifications, no longer suffice, and that for the coming period of our society's development it will be necessary to ensure that the Commercial Code includes the regulation of all economic relations. In other words, that it fulfill its regulatory function in its entire significance and impact, that in terms of its essence and content it become the principal norm of business law, its main source, and also assume in its future development the role of a significant instrument in the planned management of the economy.

The studies and surveys that preceded the drafting of the bill to modify and amend the Commercial Code accumulated and checked the arguments regarding the substantive justification of the Commercial Code. The soundness of the requirements were confirmed for a comprehensive and complete legal norm that is a unified, logically and systematically arranged whole that includes the regulation of economic relations of the same kind and simultaneously serves as the basis of executory instructions that are issued on the constitutional principle, on the basis of a law and within its framework. In this way the need was again demonstrated for the Commercial Code's integrating function in the formation of supplier-customer relations and in the regulation of economic relations in general, especially under the present conditions of our economic development.

#### Need for Adequate Statutory Regulation

The studies on perfecting the economic statutory regulations were unable to disregard the fact that the Commercial Code now in force was drafted in 1962-1963

and therefore is based on the then existing economic relations and state of knowledge about them. As the Set of Measures pointed out, the present stage of building a developed socialist society is characterized by the changes taking place in our economy. The strengthening of the intensifying factors in the economy's development, and the efforts to achieve its highest possible effectiveness and performance are of primary importance in this process. These factors unambiguously emphasize the requirement of orienting economic activity toward raising the role of planning to a qualitatively higher level, applying to practice the advances in science and technology, utilizing the advantages inherent in international socialist integration, raising the effectiveness of managerial work, improving the economy, efficiency and quality of the products, and toward making our products more competitive on world markets. These factors also are the main stimulus influencing the further development of the statutory regulation of economic relations.

It has proven necessary to modify and amend the Commercial Code. Solution of the specific problems in the implementation of economic policy demands that in the superstructure an adequate statutory regulation be introduced, one that expresses the new stage in our society's development, the construction of a developed socialist society, satisfies the timely needs and tasks under the existing conditions, and can successfully ensure, substantively and in terms of time, the attainment of the set objectives. Modification and amendment of the Commercial Code are necessary also because some of its provisions have become obsolete and less effective, and in some instances also the limiting provisions for the further development of economic relations.

When we speak of modifying and amending, it means that the existing Commercial Code--in terms of its concept, viability, timeliness and prospects--meets the requirements for a code of this type, that it is able to fulfill its political, social and legal functions. Indeed, acceptance of this conclusion is not only not in conflict with the facts, but in the given case it is contingent on changes and additions to the Commercial Code now in force, within a framework that in its content meets the mentioned present requirements and future objectives. Otherwise it would follow from the very nature of things that the prerequisites would be lacking for the full effect of this unquestionably important part of our socialist legal system, and the requirements would not be met that socialist law, in its full meaning, significance and impact, must be an active, organizing, effectively controlling and regulating instrument, and not merely a reflection, albeit an adequate one, of the already attained level of political, economic, social and other relations of society. This active, organizing and regulating role of socialist law is a general requirement. It clearly emerges in the area of regulating economic relations.

In terms of their content, the Commercial Code's proposed modification and amendment are fairly extensive legislative measures. They affect practically all economic relations. There are provisions that are necessary and important for the further development of economic relations. In terms of their content and of the objectives they serve, they represent qualitatively new elements in the statutory regulation of economic relations.

The proposed modifications, changes and amendments are based, from a formal point of view, on the concept that the Commercial Code must be a comprehensive legal regulation of the economic relations that arise under the planned management of

economic activity, of the economic relations that arise in cooperation between socialist organizations, of the credit and payment relations, etc.

#### Basic Orientation of the Modifications and Amendments

The stage of building a developed socialist society sets for the system of planned management the emphatic requirement that it optimally serve to increase social production's effectiveness. Thereby it demands the elimination or suppression of the elements, factors and instruments that up to now aided the economy's extensive development; and the introduction and application of new elements, methods, factors and instruments that in themselves, or in combination with other methods, instruments and factors, will enhance intensive development and will favorably influence the effectiveness of entire economic activity.

Strengthening the influence of the intensive factors in the development of our economy--the basic orientation of the process of perfecting our system for the economy's planned management--demands appropriate consideration and support in the legal system. It logically follows that this is one of the basic directions in which perfection of the legal system, specifically of the provisions of business law, must proceed. The requirement to raise effectiveness was also one of the basic starting points, the motive and criterion, for evaluating and verifying the viability of the present regulations' underlying concept and their adequacy, just as the search for new solutions was the basis for the Commercial Code's modification and amendment. This also applies to the standpoint which assumes that this legislation will effectively contribute to the further successful development of our socialist society, to the efficiency of the Czechoslovak economy's planned management, and to its further development.

Assertion of these requirements, which extended in their consequences to the entire Commercial Code and also to the other norms of business law, demanded the economic and legal solution of a number of questions that are not regulated at all in the present Commercial Code or are regulated only in general, incompletely or in such a way that its provisions conflict in varying degree with the present and future needs and objectives. The tasks of present development urged more and more intensively with each day that the Commercial Code regulate in their necessary content, scope and depth primarily the economic relations that are crucial or significant for successful economic development. This applies primarily to the regulation of economic relations in the areas of scientific and technological progress, capital construction, economic specialization and cooperation, and export and import.

The questions of linkage between the plan and economic obligations, the role of economic contracts, including long-term ones, and the role of the system of sanctions demanded special attention. In their broader interrelations these are problems that concern the planning process, the clarification of the role of the planning process as a whole and of its individual stages, and the investigation of the legal aspects of the economic relations in the individual stages of the planning process. Naturally, the studies and specific proposals for the regulation and legal solution of these questions did not stem solely from an effort to make the Commercial Code juristically more perfect. The primary consideration was satisfying the needs of society. The studies and proposals were based on the requirements set for supplier relations as economic relations that ensure the satisfaction of the customers' needs and thereby realize the intentions and objectives of the party and state's economic policy.

## Economic Relations in the Stage of the Plan's Preparation and Drafting

The proposed modifications and amendments take into consideration the assumptions that the quality and desired level of supplier-customer relations, and of economic relations in general, depend on the quality and level of discussing supplier-customer relations already in the stage of preparing and drafting the plan, and on how these relations are then further refined and developed. The significant role--the key role, we might say--thus manifested itself in the legal regulation of those economic relations in which the tasks are clarified that are assigned for the preparation of the plan, with the active participation of the enterprises at which the future contracts already are being negotiated and drafted.

Business-law relations are characterized by the fact that the conclusion of an economic contract is the outcome, rather than the start, of the cooperation between socialist organizations that begins long before the contract is signed. This is an important legal aspect that must be taken duly into account in economic legislation. This aspect also demands that attention be given to the economic relations that arise during the discussion of supplier relations in the stage of drafting the plan, relations that eventually become economic contracts at a certain level of their finalization. From this it follows that if business law is to regulate economic relations effectively, it cannot limit itself to regulating only contractual relations and disregard the economic relations that aid and precede the conclusion of economic supply contracts.

The fact that the economic relations which arise on the basis of the tasks the central agencies set in the stage of drafting the plan, and the relations that ensure fulfillment of the plan's tasks constitute a single complex whole cannot but find appropriate expression in the legal regulations and safeguards.

The Commercial Code now in force does not contain any provisions for economic relations in this sense. Which means that the code does not regulate the relations that arise during the plan's preparation and drafting, neither in content nor in scope.

Statutory regulation of economic relations in this sense emerged and developed during the past decades in the form of regulations below the status of laws, in accordance with the needs and requirements of the managing central agencies. The reason and justification for this lies in the fact that economic relations of cooperation arising during the plan's preparation and drafting were rather variable and subject to changing views regarding the interrelations of the plan, planning document, and of the economic contract. Considering the high status of laws and the procedures for changing them, the inconvenience or inadmissibility of frequent changes, and the unsettled controversy over the legal basis and normative content, to regulate these relations in the form of a law would have, among other things, stifled the desirable evolution of views on these questions and problems. At the present time, with the controversy over the economic relations arising in the stage of the plan's preparation and drafting settled, it has been both possible and necessary to lay down the principles of these relations in the introduced bill to modify and amend the Commercial Code in the desired content and scope. Incorporated in this bill are principles whose viability and stability the past years have tested and verified. The proposed provisions provide a legal basis for more detailed regulation in the form of executory instructions, which can be adapted more easily to the specific conditions and is unavoidable in view of the peculiarities of this area of regulation.

Actual regulation of these questions is based on the hypothesis that the negotiation of supplier-customer relations is the basic form of cooperation between socialist organizations, specifically in the period of preparing and drafting the medium-range (usually five-year) and the implementation (usually annual) plans. The statutory provisions that incorporate this regulation, which applies also to tasks of the medium-range plans, simultaneously create the basis for the stability of supplier-customer relations where feasible and necessary. They set the negotiation of supplier-customer relations as a general obligation, with due consideration for the urgency of certain needs and the extent to which they are ensured, and their intention is to ensure that the tasks set for the preparation of the plan are sufficiently finalized and secured through economic contracts.

The statutory provisions could not disregard the cases in which no agreement is reached in the negotiation of the supplier-customer relations, and when suppliers refuse to accept a task as the task of the plan. They regard and specify the solution of the disputes by the responsible organs of economic management in the given stage of the planning process as an important legal obligation. This is entirely proper. For otherwise these conflicts would emerge in the stage of the plan's realization, which would then cause serious disruptions for the customers. Naturally, such a situation or phenomenon would enhance the authority of neither the plan nor of the economic contracts. Therefore the proposed bill contains basic provisions for the settlement of disputes by the superior organs. It regards the settlement of disputes as an inseparable principle of the negotiation of supplier-customer relations in the stage of the plan's preparation.

This proposed basic regulation has the potential to become a stabilizing and active organizing and regulating factor that has the prerequisites to favorably influence the formation of supplier-customer relations in the stage of the plan's preparation.

#### Economic Contracts' Enhanced Effectiveness

At their recent congresses, the communist and worker parties in most socialist countries emphasized the importance of economic contracts, but also the requirement of increasing their effectiveness in the fulfillment of planned tasks. Which confirms and emphasizes the hypothesis that the questions associated with the greater effectiveness of economic contracts and their arrangement and regulation are an inseparable part of all measures directed toward improving the quality of the economy's planned management.

The congresses of the communist and worker parties also pointed out the ways in which economic contracts must be used to better satisfy the needs of society, to make them more effective in the planning process, and to thus strengthen their influence on the formation of economic relations.

At its congresses the Czechoslovak Communist Party has likewise emphasized the role of economic contracts. At the 16th party congress it emphasized that the tasks of the plan must be secured with economic contracts already in the period of the plan's preparation.

The introduced bill incorporates these same conclusions. In the mentioned area it offers a number of new elements that conform to the new trends in the development of customer-supplier relations.

In conjunction with the needs of forming supplier-customer relations, the Set of Measures has focused attention on the requirement of strengthening long-term contracts and of improving their quality and effectiveness, together with the issuance of planning documents and other decisions, which would be of long-term validity and would thus provide a long-term basis for the formation of long-term relations. The Set of Measures sees the basic solution in the greater effectiveness of economic contracts, specifically of long-term ones, in the system of the economy's planned management and primarily in the system of planning. Economic contracts cannot originate, exist and--figuratively speaking--live without a link to the plan, respectively to its tasks. This is a correct interpretation of the consequences of the conclusion that under a system of the economy's planned management the function of the economic contract is constructed on the principle that it must ensure the realization of the plan's tasks. The expansion of long-term relations presupposes and demands appropriate measures and modifications in business law. The relationship between the expansion of long-term relations on the one hand, and with the system of planning and the specific managing activity of the appropriate organs of economic management on the other, likewise presupposes and demands appropriate measures and modifications, respectively conditions, in the system of planning, in agreement with the conditions of specific managing activity.

These approaches and solutions are the basis of the proposed new concept of the economic contract's function in the introduced bill.

The draft of this legal measure redefines the concept of the economic contract in the sense that economic contracts specify and ensure the planned tasks, but at the same time they also serve as one of the bases for the preparation and drafting of the plans. This aspect of the preparation and drafting of the plans, referred to as the planning function of the economic contract, is a new positive factor that lately has proven to be a viable, and hence significant, principle. It is projected into the proposed bill in two respects. First of all, the bill specifies that the superior organs of economic management, respectively the organizations entrusted with the administration of the material balances, must start out from the contracts concluded on the basis of planning decision when preparing the breakdowns of the tasks intended for drafting the plans, of the material balances, and of the plans' tasks. In the same way the obligations stemming from economic contracts are a binding basis for the organizations when preparing their economic plan, and especially their production plan. Admittedly, the proposed bill makes the contracts for planning purposes binding only in cases when the economic contracts are concluded on the basis of preexisting planning decisions.

The mentioned role can best be fulfilled by economic contracts of a preliminary nature and concluded for a period of several years (so-called long-term contracts). In defining the economic contract, the proposed bill states, among other things, that economic contracts are concluded to prepare future mutual fulfillment, or as supply contracts (realization contracts).

The proposed bill specifies also other functions, possible applications, uses and effects for the economic contracts. If the Federal Assembly adopts the government-sponsored bill, this will enable also the organs of economic management to conclude economic contracts, especially long-term ones. Preliminary economic contracts would be concluded by economic production units and perhaps even by ministries. This proposed new provision is a logical extension of the principle already included in the present Commercial Code, i.e., that the ministries

and economic production units are responsible for supplying the national economy with industrial goods and services. They are responsible for ensuring that their subordinate organizations, within the framework of the set tasks, will fulfill their basic obligation: to maximally satisfy the needs of the national economy. In accordance with this, the mentioned organs are also obliged to organize the supplier-customer relations.

Thereby the introduced bill permits the conclusion of long-term preliminary contracts also at the mentioned level and provides room enabling the organs of economic management to employ also contractual instruments within the limits of their responsibility for supplying the national economy.

Thus the introduced bill strengthens also in this manner the economic contract's function. It presupposes the economic contract's wider use than up to now as the form of cooperation, even between supplier and customer ministries, and at the same time the economic contract must be an instrument for organizing supplier-customer relations also within a ministry or other central agency.

#### Obligation to Contract

The introduced bill has also other new features. Starting out from the planned nature of supplier-customer relations and from the experience gained in recent years, it strengthens the regulation of the obligation to contract. A new element in this statutory provision is that the obligation to contract is extended to include also the preparation of deliveries. The purpose of this further provision is to reinforce the conclusion of long-term contracts and to achieve wider contracting of this type to ensure the plan's tasks.

The mentioned new provisions, together with other modifications, reflect the trend that preliminary contracts must become the basic form of cooperation between socialist organizations, and that from the long-term contracts there are to be derived contracts covering shorter--i.e., annual, quarterly, monthly, etc.--periods.

From the hypothesis that we have already mentioned--i.e., that the way to strengthen long-term contracts must be sought in the solution of the related questions, particularly in the system of planning and, in agreement with it, also in managing activity--there follows for the Commercial Code also the conclusion that this legal norm links the inception of the obligation to contract to the existence of a planning document that would not be limited to one year but would cover even a period of several years when necessary. The introduced bill further assumes that the obligation to conclude a contract for the preparation of deliveries arises on the basis of a government decision that assigns a task to be ensured through long-term contracts. The purpose and intent of these proposed provisions are to ensure for important tasks the subdeliveries that will be required over a longer period of time, and to avoid situations such as when the necessary parts or subassemblies are lacking for, say, new types of trucks, tractors or other products.

In defining the obligation to contract, the introduced bill responds to the serious shortcomings that occur in supplying necessary spare parts. It specifies the obligation to conclude a contract for the preparation of deliveries to ensure the necessary spare parts for the products that the organizations supplied



or imported. This obligation lasts as long as it is customary and expedient to repair the products. If in specific instances there is no agreement on this period of time or if it is not determined, the bill introduces a substitute period of ten years from the discontinuation of the products' manufacture.

A new provision in the regulation of the obligation to contract is also the priority of tasks necessary to provide preventive medical care.

These new provisions include also the regulation of the obligation to contract also in the case of supply contracts.

The introduced bill attaches great importance to regulating the obligation to contract. But it would be a mistake to overestimate the importance of the obligation to contract, and for customers to rely too much on the preferences provided by law and not to assert their requirements through the plan. The regulation of the obligation to contract is not directed against planning discipline and it does not intend to abolish the latter. It should serve as a guide for the supplier as to which needs he must ensure first of all. Under no circumstances does it intend to negate the planning process or to replace the role of the plan and the planning process as a whole.

#### Economic Incentive Linked to Contractual Discipline

To achieve ever-higher qualitative results in the realization of the plan's tasks is a justifiable, necessary and law-conforming requirement. It starts out from the basic mission of material production under socialism. In conjunction with this requirement there rises to the forefront of attention the question of effective stimulation that will influence the economic activity of the enterprises in the indicated direction, and will simultaneously prevent the rewarding and rating of the enterprises on the basis of the quantitative results, disregarding or assigning merely to second place the qualitative criteria.

The Set of Measures responds to this problem. It starts out from the assumption that the realization of economic obligations is ensured by the system of financial responsibility, and also by the system of economic incentives for the enterprises and their appropriate managers. Simultaneously it orders the elaboration of the question of a gradual changeover to the evaluation of the economic activity of economic production units and enterprises on the basis of their economic contracting.

According to the assumptions, this task is to be realized in two stages. The purpose of the first stage is to create a situation such that the enterprises will conclude economic contracts. Thus the conditions are created that will permit, after a certain length of time, to begin evaluating economic activity on the basis of the economic contracts' fulfillment. So far as the conclusion of economic contracts is concerned, this means that within the system of economic incentives it is necessary to create the prerequisites for inducing the enterprises to conclude economic contracts even more widely than up to now. Therefore the introduced bill anticipates using economic incentives so that the enterprises will conclude their economic contracts in due time. It specifies that the enterprises must conclude within a certain period of time their economic contracts covering deliveries for the next quarter, for the planned volume of products.

In the course of further work it will obviously be necessary to include in the special regulations on economic incentives provisions for cases in which the organizations either did not conclude economic contracts at all or concluded them only before shipment. These questions are still the subject of studies. Sufficient verified arguments are lacking to define their content, and for their specific statutory regulation and scope of obligatory contracting. In any case, it will be necessary to exert the desirable amount of effort to achieve better contractual coverage of deliveries, through measures that fall within the system of economic incentives and the system of financial responsibility.

#### Role of Financial Penalties

The system of financial penalties as a whole plays an important role particularly in the area of business law. It provides disincentives for the enterprises to ensure their desirable behavior, and especially that they perform their economic contracts properly and on time, thereby fulfilling the tasks of the state plan. Thus the "teeth" of the financial sanctions are directed against violations of contractual obligation, legality and order.

On the one hand, financial penalties have their favorable effects. On the other, however, they are not a cure-all and their effect is not unlimited.

The financial penalties induce the organizations to perform more effectively their obligations for whose violation the penalties have been introduced. But a penalty can also work against its intended purpose and have an unfavorable effect. It would be a mistake to assume a directly proportional relationship: that the higher the penalty, the greater the effort to fulfill the obligation whose violation is subject to a penalty. The risk of an incommensurately high penalty, or of too many penalties, will deter the organizations from assuming contractual obligations whose nonfulfillment is subject to penalties. The risk of an incommensurate penalty will also discourage the efforts and initiative of the organizations and their workers to fulfill their tasks. Financial penalties must be carefully balanced and commensurate, and they must fulfill very sensitively the purpose that they serve.

The Commercial Code now in force regulates financial responsibility only in case of violation of obligations between organizations. A serious violation of obligations may also be antisocial behavior on the part of the organizations and may have very unpleasant consequences for satisfying the needs of the national economy, thereby violating the interests of society as a whole.

State enterprises are the unified economic mechanism's links that are assigned certain tasks. From which it follows that the statutory regulation of contractual relations must take into account not only the enterprises' responsibility to their contracting partners, but also their responsibility to society. After all, contractual relations between socialist organizations do not involve merely relations between equal partners, confined only to the organizations in question, without wider implications. These are not relations that arise and develop further without affecting society.

#### New Element: Economic Fines

These are the reasons for introducing so-called economic fines that represent a new element in the regulation of business law. Pursuant to the introduced bill,

economic fines are to be levied on organizations or the organs of economic management (with the exception of budgetary organization, the central organs and the national committees) for serious or systematic actions against the interests of society, in cases for which the statutory regulations now in force do not provide financial penalties. The organization or organ of economic management will be obliged to pay the economic fine into the state budget, on the basis of a decision by the appropriate state economic arbitration organ. Thus an economic fine will not be levied automatically. It may be imposed only on the proposal of central organs (committees of people's control, the ministries of finance, the price offices, and the Czechoslovak State Bank) or of the economic arbitration organs, provided that the facts decisive for the imposition of a fine have been clarified in the dispute. The specified central organs, in view of their authority to hold audits, have the prerequisites for determining objectively the facts that decide whether a fine can be levied or not. Even when there are reasons for levying a fine, this in itself does not mean the arbitration organ will impose a fine in every case. The appropriate state economic arbitration organ must take into consideration all the circumstances of the case when deciding whether to levy a fine.

The purpose of regulating so-called economic fines in the introduced bill is to deter the organizations and the organs of economic management from committing serious antisocial acts in their economic activity. The significance of this new economic legal sanction lies predominantly in prevention.

The aim of the economic fine is not merely to punish. The objective is to upgrade work and to improve its quality in general. For the organizations and organs of economic management the Commercial Code sets a series of obligations to attain a certain level and quality of economic activity. The economic fines will find their justification and logic primarily in the context of these obligations. They will encourage the proper performance of the duties set for the economic sphere and will provide the legal basis for effectively influencing the economic organizations and organs of economic management to behave in accordance with the interests, needs and objectives of society as a whole. Through their own action and in their own way, the economic fines will aid the Commercial Code in performing its functions, while ensuring and observing socialist legality and order in the economic sphere.

#### Liability for the Quality of Deliveries

The questions of the high quality of deliveries are undoubtedly of primary importance in the present stage of our economic development. Improvement of the technical and economic level and quality of our products is a factor in, and a condition for, completely satisfying the demand on the domestic market and in productive consumption, intensifying our participation in the socialist countries' economic integration, and improving the ability of our products to compete on international markets.

The efforts to attain high product quality necessarily influenced some provisions of the Commercial Code. Admittedly, the attainment of the desired results does not depend on business law alone. It also depends on an entire series of other factors. However, the provisions of business law are able to contribute to the joint efforts to improve product quality.

The Commercial Code contains a system of business-law liability that has proven suitable in practice and continues to satisfy also the present requirements. The introduced bill's new provisions to increase product quality merely supplement this system. They regulate only certain questions. But this is sufficient at the present time.

In the efforts to attain a high quality of deliveries, lately the trend has intensified that also the federal government expressed in its resolution No 108 of 14 April 1982. Pursuant to this resolution, in some instances the quality of deliveries must be inspected before the deliveries are fulfilled. Once the deliveries have been made, product defects are not detected immediately, aside from the fact that after delivery the customers incur damages and losses of the most diverse kind.

The introduced bill prohibits under certain conditions the delivery of products found to be defective during inspection before delivery. This provision applies first of all to cases where the supplier himself finds the products to be defective during production. In most cases, however, inspection before delivery will be performed--pursuant to statutory regulations or by mutual agreement between organs of economic management or between the organizations involved--by the designated inspection organ, the customer or some other organization.

The pertinent provisions of the introduced bill specify that a violation of the prohibition to deliver without prior inspection will make the delivery null and void, and it will be considered as if it had not been made at all, also in the evaluation of the enterprises' plan fulfillment.

The introduced bill provides a basis for the expansion of inspection prior to delivery. It authorizes the executory instructions (in the form of general conditions of delivery) to specify when and under what conditions the supplier must allow the customer to perform his receiving inspection already at the supplier's plant and to check the quality already in the course of production.

This unquestionably is a progressive solution of the given problem, but it requires a differentiated, sensitive and deliberate approach, in accordance with the specific conditions of the given economic relations. This modification permits something that up to now was not customary and was difficult to imagine. Hence it is a significant positive initiative.

#### Relations in Export, Import and International Economic Cooperation

In the area of export, import and economic cooperation with foreign partners, the norms of business law have a function that is significant but at the same time also specific. They lead the socialist organizations to behavior that appears the optimal for achieving maximum effectiveness when the Czechoslovak economy participates in external economic relations. The importance of this function is enhanced under the present international situation when on the one hand we must intensify as much as possible Czechoslovak participation in the international socialist division of labor, and on the other hand we must confront the more complex conditions and crisis phenomena that our foreign trade encounters on capitalist markets.

In agreement with the Set of Measures, therefore, the introduced bill strives, among other things, to make more effective the statutory regulation of the obligations that arise in export and import. To this end it contains fairly extensive modifications. These consist mostly of intensifying and expanding the existing statutory provisions, and in regulating new forms of Czechoslovak participation in the international division of labor, forms that up to now the Commercial Code has not been able to consider at all.

The purpose and intent of the introduced bill in the area of export is to increase the Czechoslovak economy's ability to export. Within this framework the Commercial Code regulates the conditions under which the exporting foreign-trade organization may require that also the domestic supplier participate in the preliminary negotiations with a foreign customer. This need arises particularly in the case of substantial orders, orders for which it is necessary to negotiate complicated technical questions, in conjunction with participation in foreign fairs and exhibitions, etc. The need for the domestic suppliers' participation is routine in negotiations for orders that involve the export of complete industrial plants. The introduced bill regulates this problem so that the domestic supplier who, at the request of the foreign-trade organization, participates in the negotiations with a foreign customer is bound by his own standpoint in these negotiations, in relation to the foreign-trade organization. Thus the Commercial Code creates the conditions for desirable cooperation between foreign trade and production, on foreign markets.

In the area of import the introduced bill aims primarily to protect the foreign-exchange interests of the state. In this area there arises the complex interrelation of the plan, available foreign exchange, and economic obligation. Our foreign-exchange regulations, and the amendments issued to them, are based on the principle that a foreign-trade organization, or possibly other organizations authorized to engage in foreign trade may assume obligations involving payment to a foreign-exchange foreigner, and may make such payments, only if the foreign exchange has been made available for this purpose. Therefore the bill contains an amendment according to which the foreign-trade organization or the organization authorized to conduct foreign trade are not obliged to conclude a contract for delivery until the foreign exchange is made available that is needed to cover the costs that are incurred abroad, and without which the contract cannot be fulfilled. It likewise regulates the obligation to modify or cancel the economic obligation. There are also other provisions to protect the availability of foreign exchange. They ban import deliveries not yet contracted abroad, if the reason for their realization has subsequently fallen through. This applies also to imports of machinery and equipment whose proper utilization has not been ensured in advance, and to imports of machinery and equipment with an undesirably long lead time.

In many instances the participation of Czechoslovak organizations in production specialization and cooperation, and in scientific and technical cooperation with foreign countries--the introduced bill refers to these forms of foreign economic activity collectively as "economic cooperation with foreign countries"--requires the assumption of economic obligations also in domestic relations. This fact is taken into account in the statutory regulation that temporarily is contained only in a legal norm of lower status than a law (Decree No 34/1975 Zb on Economic Obligations in Export, Import and in Ensuring Economic Cooperation with Foreign Countries). However, this new important form of Czechoslovak participation in the international division of labor requires regulation at the level of the Commercial Code.

The objective of the proposed statutory regulation is to aid the further intensification and greater effectiveness of Czechoslovak participation in production specialization and cooperation, and in scientific and technical cooperation with foreign countries, especially with CEMA countries. This regulation is in accord with the provisions of Law No 42/1980 Zb on Economic Relations With Foreign Countries. The two regulations mutually complement each other.

In addition to the outlined basic regulation, the proposed amendment to the Commercial Code contains also more detailed changes, modifications and amendments, particularly in the areas of organizing and managing the industrial technology base, replacement of fixed assets, cooperation between socialist organizations, and control of the economic activity of socialist organizations. The introduced bill provided an opportunity to refine certain partial provisions of the Commercial Code, which in practice have been creating problems in their application, and which had to be overcome up to now by interpretation.

The introduced bill does not mean that work on perfecting economic legislation has ended or been suspended. Parallel with the drafting of this bill, work has unfolded on analyzing the legal norms that are below the status of laws. When their analysis and evaluation will have been completed, it will be necessary to consider, in accordance with the attained level of the national economy's development, whether the legal instruments available for the management of the national economy are of suitable quality, whether they are sufficiently effective and viable, and how well they meet the needs. The requirement that the appropriate legal instruments fulfill their functions is of primary importance, and satisfying this requirement is also the primary task of our legislative branch.

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CSSR INTERNATIONAL ECONOMIC RELATIONS VIEWED

Intensification of CEMA Relations

East Berlin AUSSENWIRTSCHAFT in German No 48, 1982 p 1

[Text] Czechoslovakia considers more intensive participation in international division of labor, above all in socialist economic integration, to be one of the decisive conditions for the attainment of the main objectives of its economic and social development during the 1981-1985 five-year plan and beyond.

The expansion and in-depth development of cooperation with the CEMA countries in the areas of science, technology, production, and investment is concretely expressed in the development of foreign trade. As a result of the coordination of the national economic plans, the trade volume with the CEMA countries will go up by about 26 percent during 1981-1985 as compared to 1976-1980, including an increase in Czechoslovakia's exports by 29 percent and an increase in imports by 24 percent. The commodity trade volume spelled out in the long-term trade agreements exceeds the target shown in the plan coordination documents by 1.5 percent. The stepped-up involvement of the Czechoslovak national economy in the processes of socialist integration is already reflected in the foreign trade results of the first 2 years of this five-year plan. The growth rate of foreign trade with the CEMA countries has been accelerated. In 1980 it was 8 percent, in 1981 it was 10.2 percent, and during the first half of 1982 it was 14.9 percent; this means that it was definitely above the overall level of Czechoslovakia's foreign trade in 1981 and during the first half of 1982.

Expansion of Specialization and Production Cooperation

The commodity structure in exports going to the CEMA countries is characterized by machinery and equipment. Their share will be between 65 and 67 percent (1980: 63.5 percent) in 1981-1985 in conjunction with increased participation in multilateral integration measures.

Production relations involving division of labor will be further expanded. By the end of 1980, Czechoslovakia was a treaty partner in more than 320 bilateral and multilateral specialization and production cooperation agreements, above all in the areas of machine-building and electrotechnology and electronics. Czechoslovakia participated in international specialization and

production cooperation involved in the development and production, among other things, of computer technology, textile machinery, equipment for nuclear power plants and for the petroleum industry, drilling equipment, container transportation equipment, roller bearings, motor vehicles, energy-intensive and less energy-intensive chemical products, equipment for the processing of solid fuels, ferrous and nonferrous metal ores, underground mining and strip mining equipment, tractors, farm machinery, food industry machinery and equipment, machine tools, as well as standardized individual parts and sub-assemblies. In 1980, products deriving from specialization and production cooperation came to more than R1.3 billion; that accounted for 20 percent of Czechoslovakia's exports to the CEMA countries. Significant shares in the export of specialized and production-cooperation-based machine-building products were recorded in 1976-1980 in the case of textile machinery (15 percent), trucks (14.5 percent), building and road construction machinery (11 percent), and locomotives (10 percent). By 1985, the share of specialization-based and production-cooperation-based products out of the export volume will rise to at least 23 percent, including machine-building product exports which will go up to 30 percent. Similar import figures are expected to be between 15 percent or 30 percent.

International specialization and production cooperation will in particular promote an output increase in the production of equipment for the textile industry, streetcars, tractors, farm machinery, chemical industry plants, hoisting equipment and conveyor equipment, trucks, as well as roller bearings.

As a result of the implementation of the agreement on specialization and production cooperation in the production of nuclear power plant equipment, Czechoslovakia, after the USSR, became the second-biggest producer of such equipment in the CEMA area. The agreement in the area of machine tools means that Czechoslovakia during the 1981-1985 five-year plan will have to handle a delivery and purchasing volume of about R560 million in transferable rubles. In line with the agreement in the field of computer technology, Czechoslovakia's exports during 1981-1985 will attain a value of around R617 million in transferable rubles while imports will come to about R515 million in transferable rubles.

Specialization and production cooperation will be developed in depth and will be expanded also concerning the production of roller bearings, tractors, farm machinery, as well as parts for the Lada passenger car. During the 1981-1985 five-year plan, Czechoslovakia's exports of roller bearings will come to almost R128 million. For the production of the Lada car in the USSR, Czechoslovakia delivers about 2.5 million headlights. Deliveries of specialization-based tractors and farm machinery will come to R347.3 million in transferable rubles by the end of this five-year plan.

#### Stepped-Up Investment Participation

After Czechoslovakia in 1976-1980 had already participated in most of the investment projects provided under the coordinated plan for multilateral integration measures (natural gas pipeline, asbestos combine, 750-kilovolt power line, etc.), it will be considerably increasing its investment participation in



1981-1985. Its share in the construction of the Chmelnizki nuclear power plant comes to around R240 million in transferable rubles; it is making this contribution in accordance with the treaties with the USSR by means of commodity deliveries in 1979-1985. These shipments include more than 50 percent equipment for nuclear power plants, about 16 percent other machinery and systems, about 17 percent miscellaneous raw materials, as well as 14 percent consumer goods. Starting in 1984, Czechoslovakia, will, for a period of 20 years, procure electric energy from the USSR; starting in 1988, the volume will come to 3.6 billion kilowatt hours annually.

After settling its investment share through energy deliveries, that is to say, after 1985, Czechoslovakia will make up for energy procurement through commodity deliveries with the structure agreed upon, that is, 60 percent machinery and equipment, 20 percent raw materials and working materials as well as essential food items, and 20 percent industrial consumer goods.

The 750-kilovolt power line to Rzeszow (Polish People's Republic) is being built in conjunction with the construction of the Chmelnizki power plant and a transformer station is being built at Rzeszow. Czechoslovakia's investment participation in these projects comes to around R15 million in transferable rubles and is being carried out through the delivery of working materials, machinery, equipment, and consumer goods to the Polish People's Republic. That includes the energy transmission operation costs via the Polish Energy grid to Czechoslovakia.

Czechoslovakia furthermore participates in the Mosyr fodder yeast factory, in the buildup of the automated complex interconnected telecommunications grid system of the CEMA countries, in projects concerning the development of international transportation routes as well as the build-up of nickel production capacity in Cuba.

#### Czechoslovakia's Trade Volume with the CEMA Countires

	Volume <sup>1</sup>	Including with CEMA countries	Share in %
	Million rubles		
1970	6,739	4,326	64.2
1975	12,171	8,036	66.0
1976	13,517	9,156	67.8
1977	15,183	10,244	67.5
1978	16,473	11,286	68.5
1979	18,240	12,260	67.2
1980	20,236	13,252	65.5
1981	21,746	14,596	67.1

<sup>1</sup> Czechoslovakia's total foreign trade volume. Source: "Statistical Yearbook of the CEMA Countries," current issues.

## Czechoslovakia's Export of Selected Products

	1956	1970	1980
Metal-cutting machine tools (units)	10,191	10,953	10,104
USSR	2,271	1,856	1,274
GDR	890	812	765
Hungarian People's Republic	97	465	412
Polish People's Republic	589	721	410
EDVA (million Czech crowns)	64	90	405
USSR	0	34	261
GDR	25	27	52
Polish People's Republic	11	13	45
Romanian People's Republic	1	7	21
Hungarian People's Republic	2	6	15
Farm machinery (million Czech crowns)	90	152	923
Polish People's Republic	54	52	279
USSR	9	40	254
GDR	8	21	241
Vietnamese Socialist Republic	0	--	25
Trucks (units)	6,302	8,562	16,198
USSR	867	914	4,630
Polish People's Republic	1,247	2,768	3,513
Bulgarian People's Republic	345	1,076	2,375
GDR	458	487	1,517
Hungarian People's Republic	139	794	11,495

EDVA--Electronic data processing equipment. "Yearbook of Czechoslovakia's Foreign Trade, 1981."

### CSSR Stresses Export Developments

East Berlin AUSSENWIRTSCHAFT in German No 50, 1982, pp 1, 2

[Text] During the first half of 1981, Czechoslovakia's foreign trade volume went up 8.8 percent, compared to the same period of time during the preceding year. It rose to about 89.1 billion Kcs [Czech crowns]. Its growth rate speeded up both compared to the first half of 1981 and compared to 1981 as a whole.

As during last year, exports developed faster than imports. Exports rose 10.9 percent to 45.9 billion Kcs, imports went up 6.6 percent to 43.2 billion Kcs. In line with the plan for 1982, the foreign trade balance with the CEMA countries was essentially evened out during the first half of the year. A trade balance surplus was achieved in trade with the nonsocialist countries, as had been the target. The surplus came to 2.2 billion Kcs, including 0.96 billion Kcs with capitalist industrial countries.

The development of Czechoslovakia's foreign trade, which was heavily differentiated by groups of countries, led to noteworthy changes in its regional structure. The share of the socialist countries rose from 70.8 percent during

the first half of 1981 to 75.2 percent during the first half of this year, including the share of the CEMA countries which rose from 66.4 percent to 70.8 percent. On the other hand, the shares of the capitalist industrial countries shrank from 21.6 percent to 18.2 percent and the share of the developing countries dropped from 7.6 percent to 6.6 percent.

### Socialist Countries

Economic cooperation with the socialist countries, especially with the CEMA countries, proved to be a stable foundation for foreign trade relations. Trade with the socialist countries remained the most dynamic factor in the development of Czechoslovakia's foreign trade. The trade volume grew by 15.4 percent, including by 15.8 percent with the CEMA countries. This means that its growth rate doubled compared to the first half of 1981. In trade with the CEMA countries, the export and import growth rates were similarly high. Exports rose by 15.1 percent while imports went up 16.7 percent. The USSR took up an outstanding position here. Czechoslovak-Soviet commodity exchange grew by 21.6 percent, with Czechoslovakia's exports going up 22.3 percent and imports rising 21 percent. The USSR's share out of Czechoslovakia's total foreign trade thus rose from 38.5 percent during the first half of 1981 to 43 percent during the first half of this year.

Trade with the Republic of Cuba also showed above-average growth (up 32.5 percent; Czechoslovakia's exports up 46.2 percent, imports up 20.4 percent), as well as with the Hungarian People's Republic (up 18.8 percent). The volume of trade with the Polish People's Republic went down by 3.4 percent with Czechoslovakia's exports declining and imports rising by 4 percent.

Trade with socialist countries not belonging to the CEMA did not reveal any such balanced development. The increase in the trade volume by 9.7 percent resulted above all from the increase in exports by 19.9 percent. Imports from these countries remained essentially the same. The SFRJ [Socialist Federative Republic of Yugoslavia] accounted for a decisive share with 84.5 percent of the trade volume with these countries. Czechoslovakia's exports went up 7.8 percent while imports from the SFRJ rose 9.7 percent. In trade with the PRC, the export-import development rate was reversed as compared to the first half of 1981. While Czechoslovakia's exports went up by 133 percent 336 million Kcs, imports declined by almost 50 percent to a figure of 163 million Kcs. The share of these countries out of Czechoslovakia's foreign trade did not change basically.

### Developing Countries

Trade with the developing countries declined by 5.3 percent compared to the first half of 1981. Both exports (down 6.3 percent) and imports (down 3.6 percent) declined. Broken down by countries, however, the development trend was highly varied. A major volume increase was achieved among others in trade with Egypt, Peru, Morocco, Brazil, Algeria, India, and Iran. Czechoslovakia's exports to Burma, Iraq, Lebanon, Syria, Algeria, Egypt, Brazil, and Peru went up above-average. Exports to Brazil for example amounted to 551 million Kcs; that was almost six times the shipment volume during the

first half of 1981. Czechoslovakia's imports grew particularly among others from India, Iran, Pakistan, Algeria, Egypt, Morocco, and Peru. Export and import trade among others with Indonesia, Malaysia, Angola, Ethiopia, Nigeria, Argentina, Bolivia, Colombia, Mexico, and Venezuela to some extent dropped considerably.

#### Capitalist Industrial Countries

In trade with the capitalist industrial countries, an import decline of 18.2 percent was contrasted against a slight export increase of 2.9 percent. The trade volume with this group of countries shrank by 8.2 percent. Trade with the FRG was particularly important here; it shrank by 28.4 percent and shared with about 1.2 billion Kcs in the decline of trade with this group of countries which was 1.4 billion Kcs. Trade with Switzerland, Great Britain, the Netherlands, Belgium, Japan, Canada, Sweden, and Norway furthermore showed considerable volume losses. On the other hand, sales to Austria, the United States, France, Finland, Australia, and Denmark went up. Compared to the first half of 1981, Czechoslovakia increased its exports above all to Austria, Switzerland, Italy, France, Denmark, and Norway; the country's imports from the United States, Finland, and Australia went up.

#### Foreign Trade Commodity Structure

With an increase of 11.7 percent, Czechoslovakia's machinery export during the first half of 1982 was included among the dynamic growth areas in exports. The essential food exports went up 22 percent, with the delivery of raw materials for the essential food industries almost tripling. Exports of industrial consumer goods rose 16.9 percent, chemical products went up 11.9 percent, and exports of breeding and other animals increased 19.6 percent.

Looking at imports, there was an increase above all in the procurement of fuels, mineral raw materials, and metals (up 13.8 percent), breeding and other animals (up 38.7 percent), as well as essential foods (up 22.6 percent). Machinery imports rose by 3.7 percent.

# Volume of Trade with Socialist Countries

	1981 first half million Kcs	1982
Total	58,019	66,977
including		
CEMA countries	54,422	63,033
USSR	31,611	38,447
GDR	7,912	8,256
Polish People's Republic	5,448	5,265
Hungarian People's Republic	3,909	4,644
Bulgarian People's Republic	2,210	2,547
Romanian Socialist Republic	1,818	2,101
Republic of Cuba	858	1,137
Vietnamese Socialist Republic	269	179
Mongolian People's Republic	114	129
SFRJ	3,066	3,333
PRC	457	499

Source of tables: "Foreign Trade of Czechoslovakia, September 18, October 82."

# Volume of Trade with Developing Countries

	1981 1st half Million Kcs	1982	Change in %
Total	6,240	5,910	- 5.3
including			
Brazil	666	370	+30.6
Iran	540	637	+17.9
Libya	763	603	-21.0
India	448	533	+18.9
Egypt	289	462	+59.8
Iraq	491	450	- 8.4
Syria	374	381	+ 1.8
Algeria	133	165	+24.0
Lebanon	140	155	+10.7
Afghanistan	118	113	- 3.4
Morocco	49	71	+44.8
Peru	36	54	+50.0
Venezuela	67	48	-28.4
Tunisia	59	48	-18.7
Bolivia	53	19	-64.2

# Foreign Trade with Capitalist Industrial Countries

	Volume		Export		Import		Change in %
	1981 1st half Million Kcs	1982 1st half Million Kcs	1981 1st half Million Kcs	1982 1st half Million Kcs	1981 1st half Million Kcs	1982 1st half Million Kcs	
Total including	17,689	16,240	8,356	8,602	9,333	7,638	-18.2
FRG	4,344	3,113	2,508	2,385	1,836	728	-60.3
Austria	2,245	2,393	1,244	1,401	1,001	992	- 0.9
Switzerland	2,020	1,671	695	826	1,325	845	-36.2
Great Britain	1,405	1,147	531	480	874	667	-23.7
Italy	1,029	974	572	644	447	330	-26.2
United States	767	866	171	164	596	702	+17.8
Netherlands	1,062	722	564	403	498	319	-35.5
France	738	781	408	492	330	289	-12.4
Japan	545	457	125	131	420	326	-22.4
Belgium	639	441	198	206	441	235	-46.7
Sweden	447	370	211	189	236	181	-23.3
Canada	455	338	181	153	274	85	-69.0
Finland	316	343	224	203	92	140	+52.2
Greece	356	326	145	142	211	184	-12.8
Australia	256	326	86	78	170	248	+45.9
Denmark	221	232	123	159	98	73	-25.5
Norway	197	145	93	114	104	31	-70.2

# Foreign Trade Commodity Structure

	1st half 1982 Export Million Kcs	Share in %	Import Million Kcs	Share in %
Total	45,942	100	43,185	100
Machinery, equipment, tools	23,358	50.9	12,522	29.0
Fuels, working materials, raw materials	12,123	26.4	24,599	57.0
Including				
Fuels, minerals raw materi- als and metals	6,768	14.7	17,409	40.3
Chemical products	2,688	5.9	3,834	8.9
Construction materials	965	2.1	229	0.5
Raw materials of vegetable and animal origin	1,702	3.7	3,127	7.3
Breeding and other animals	55	0.1	43	0.1
Essential foods	1,711	3.7	3,485	8.0
Including				
Raw materials for the essential foods industry	755	1.6	1,398	3.2
Foodstuffs	956	2.1	2,087	4.8
Industrial consumer goods	8,145	17.7	2,332	5.4

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CSO: 2300/90

## PROFIT SHARING FROM LABOR SAVINGS DISCUSSED

Prague PRACE A MZDA in Czech No 10, 1982 pp 12-17

[Article by Eng Milos Pick: "Material Incentives for Labor Savings Under Current Conditions"]

[Text] Results Thus Far

In its development over a long period after the war, the level of labor productivity in the CSSR more than tripled, i.e., it increased almost 5 percent annually. According to analyses, however, it is still lagging far behind the top world standards. Moreover, despite our extensive untapped resources, its growth has been decelerating in recent years. In 1981 it even declined (by 0.7 percent in the entire production sphere):\*

## Annual Increment in Labor Productivity

(Created national income per worker -- increment in percent compared with the preceding year)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>State Plan 1982</u>
Production sphere - total	3.9	3.8	3.5	2.4	-2.4	-0.7	0.5
Of Which:							
Industry	5.1	0.9	3.8	2.8	2.1	0.5	.
Construction	2.5	-4.0	1.9	0.0	4.5	1.8	.

The above-mentioned retarded growth of labor productivity is caused mainly by restraints on the growth of production, for example, limited resources of raw materials and energy, which in our situation (we are importing most raw materials and a sizeable portion of energy) result again most of all from the insufficient export efficiency of our economy. In other words, our productivity in the broadest sense of the word (including the parameters of utility and quality of products) is lagging behind exacting world standards.

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\*Preliminary data.



Of course, the conditions for a more rapid growth of productivity are more demanding when there is slow growth of our production, because, among other things, some workers must be transferred to other activities (especially the service sectors) for full utilization of labor. Labor productivity cannot improve by so-called relative labor savings alone (production growing at a higher rate than the number of workers). To a great extent, it is also necessary to achieve so-called absolute labor savings (to reduce the number of the work force) and to release workers to other sectors (by changing the structure of employment).

Economic incentives (to enterprises and individuals) for labor savings should also aid in this task (in agreement with the Set of Measures for Improving the Planned Management System). They are based particularly on the system regulating employment and wages payable of the organizations (VHJ [economic production units] and enterprises) as well as enterprise subdivision and personal economic incentives for saving of labor.

The main device of such economic incentives (in conjunction with the number of workers regulated by the plan) is now especially the restriction of wages payable by the plan. (In economic organizations, this concerns, as a rule, relative limits, i.e., norms in relation to results of performance, expressed particularly by indicators of adjusted value added and profitability of production assets.) At the same time, the so-called "lid," i.e., the penalty for exceeding the planned average wage by progressive restrictions of wages payable, has also been revoked.

This system (especially its basic device -- the limits of wages payable) should motivate enterprises to raise labor productivity by according preferential treatment for absolute labor savings over relative labor savings, and by preferential treatment of savings already included in the plan over savings achieved only after its implementation.

These principles have been applied in their current form particularly since 1981. In 1982, they were further intensified and modified in detail, as follows:

1. Obligatory limits of the number of employees, based on the state plan, were set for 1981 for all organizations within the system regulating employment. Organizations which in the counterplanning stage (preparation of their own economic plan) decided to fulfill their tasks with fewer employees were able to use all the wages payable they had saved (according to the planned reduction of their personnel) to raise their average wages. To raise their average wages, organizations were able to use only part (differentiated from 30 to 70 percent) of the savings achieved by releasing more employees than the plan called for only during its implementation, because they (with the exception of organizations whose all tenured official jobs are subject to systemization) must use the deductible amount by which their usable quota of wages payable had been decreased. This method was intended to prefer reduction of personnel projected in the plan over savings of labor achieved only during the implementation of the plan.

Starting in 1982 the obligation of economic organizations to limit the numbers of their employees has been lowered (it is specified for information only and for VHI organizations comprehensively; in each kraj its ceiling is set by the KNV [regional national committee]). Every organization may keep all wages payable it had earned by saving labor (application of the above-mentioned deductible amount of the usable quota of wages payable) even in the implementation of the fulfillment of the plan.

The program of good management (CSSR Government Decision No 346/1981) outlined the tasks in reducing the number of employees in management and administration up to 1985. In this conjunction, all wages payable saved are left [to the organization] if more employees have been released than the plan had stipulated as well as if labor savings exceeded the plan during its implementation. In addition, budgetary, contributory and certain economic organizations will also keep some of the wages payable saved in previous years (20-60 percent).

2. Organizations are encouraged to save labor by means of the total usable amount of wages payable, which is the basis for personal economic incentives offered to individual work teams and individual employees so as to promote reduction of employees. General recommendations concerning the most efficient use of wages payable are contained in pertinent instructions of the FMPSV [Federal Ministry of Labor and Social Affairs] (Act No 31-184/81-7210) which presuppose that the organization will provide their comprehensive, detailed specifications in its internal regulations. These instructions order superior organs and organizations to divide the savings of wages payable efficiently among vital sectors of personal incentives, and also to proceed efficiently in selecting the most appropriate wage forms of such incentives.

However, the unfavorable tendencies mentioned above -- slowdown up to standstill of the growth of labor productivity -- could not be thus reversed even with the aid of the labor-saving measures and economic incentives (including counterplanning), as also confirmed by a comparison of the state plan with the economic (enterprise) plan and with actual achievements.

Growth of Productivity and of the Number of Employees in Economic Organizations  
(Annual Growth in Percent)

<u>Item</u>	<u>1981</u>			<u>1982</u>	
	<u>State Plan</u>	<u>Enterprise Plan</u>	<u>Actual Situation</u>	<u>State Plan</u>	<u>Enterprise Plan</u>
Labor productivity (per worker adjusted labor added)*	3.0	2.3	2.9	1.3	1.4
Average wage	1.6	1.6	1.6	1.0	1.1
Number of employees	0.4	0.5	0.4	0.3	0.4

\*Date presented in the table are not comparable with the above-mentioned data on the growth of social productivity of labor (expressed by created national income in constant prices per employee). Because adjusted value added is expressed in current prices, and therefore, here it does not reflect the actual growth

of labor productivity alone but also price changes (growth). Nevertheless, it does permit at least an approximate comparison of the state and economic plans with the actual situation.

While drafting the economic, or as the case may be, the enterprise plan, absolute savings of labor have not been achieved in either of the years under consideration. On the contrary, the planned increment of employees increased. The rather minor relative savings (higher rise of productivity) in the 1982 enterprise plan is accompanied in a similar way by absolute increases in planned employment above the state plan (i.e., the below-mentioned effort to maintain or increase employment even if the growth of the production is stagnating or had insignificantly increased).

On the one hand, there is no confirmation of the apprehension that any relaxation of the so-called "lid" might endanger the development of wages and lead to an excessive growth of wages. On the other hand, thus far the anticipation that the above-mentioned measures would efficiently promote relative and absolute adjustments of labor and reveal massive untapped assets in the management of labor value added has not come true.

Extensive tendencies in labor management continue despite the fact that the slowdown of production has also created a slightly different situation of labor; the tension between the demands for labor forces and their resources has eased and the shortages of work forces do not seem to be intensive and frequent. There are first indications that by overcoming this tension its negative effect on labor morale, efficiency and fluctuation will also be mitigated. However, enterprises reacted to the new situation more with an effort to maintain or even to raise the current level of employment irrespective of the tasks of production. On the basis of counterplanning in all of our national economy, the planned increment of employment increased in 1982 to 31,000 persons, while the state plan had envisaged 17,000 persons. Therefore, the relaxation of the obligation to limit the number of employees failed thus far to bring about more flexible structural changes and instead, increased the number of workers.

So far the enterprises have not fundamentally changed their attitude; in other words, they did not progress from the extensive to the intensive method of labor management even after the Set of Measures (including all measures mentioned here) had been introduced.

Nevertheless, it would be simplistic to accept this statement on its face value, since it is just one side of the coin. The problems are more complex and suggest many other questions. May we expect a change in the attitude of our enterprises, since the above-mentioned extensive tendencies -- higher employment regardless of production tasks -- continued to be reflected also in the attitude of higher echelons of the management? For example, despite considerable differentiations in the increment of production (from -3.1 percent to +11.8 percent), the specifications of the state plan for 1982 for individual VHI in processing industries substantially dimmed and leveled its effect on the planned dynamism of employment (from -0.3 percent to +1.9 percent). Has the

state plan for 1982 taken a good bite of this sour apple by introducing adequately intensive structural changes? After all, they were supposed to create an appropriate "space" for employees released from enterprises with stagnating production -- for example, by steppedup development of other activities, especially paid services. And finally: Were the measures implemented in the system of management effective enough in changing the attitude of enterprises even in the current exacting problems?

#### Analysis of Causes

For various reasons it is not easy to assess the effect of the measures regulating economic incentives on the above-mentioned results:

--the results are influenced by certain other factors (particularly by the overall focus of the plan, the system of management as a whole, and thus, not only by its subsystems -- regulation of employment and wages); it is therefore, difficult to express the effect of economic incentives alone;

--the period under consideration is much too brief for any far-reaching conclusions and, furthermore, it has been affected by certain extraordinary circumstances; in 1981 the Set of Measures had not yet been implemented (specifications of certain regulations and measures were delayed) and in 1982 some initial preconditions (for instance, complications in drafting the 5-year plan as the basis for economic incentives) have already been changed.

To make at least preliminary determination of the causes of the above-mentioned results and negative tendencies, a study of labor-saving measures was conducted in selected VHI and enterprises during February and March 1982. To evaluate their effect objectively, the study also analyzed other relevant causes of the development, including the effect of declining labor productivity.

The savings of labor may be characterized in brief as follows:

1. Practically none of the 11 organizations included in the study achieved absolute savings of labor in the plan (in counterplanning or in the economic plan, as compared with the specifications of the state plan); this applies for 1981 as well as for 1982 (with the exception of negligible savings amounting to 0.1 percent in one organization in 1982). Relative savings of labor (i.e., on the basis of higher production without absolute labor savings), however, are included in the 1982 plan in 5 of the 11 organizations under study. They appear relatively distinctly, albeit unevenly, in the indicator of value added (from 0.5 percent to 1.8 percent in individual organizations, the average being 1.0 percent) as well as in the indicator of gross industrial production (from 0.2 percent to 2.3 percent, average 1.1 percent). Furthermore, it is not certain whether, and to what extent, they represent actual savings (for example, from saving material costs) or whether this is some discrepancy with the material plan of production or price effects.

2. While implementing the plan (as compared with the economic plan) in 1981, absolute and relative savings of labor were achieved in practically all 11

organizations under study. Relative savings, however, are essentially more distinctive (from 0.2 percent to 5.9 percent, on the average 2.2 percent, in the indicator of value added, and from 0.2 percent to 6.3 percent, on the average 2.0 percent, in the indicator of gross production). Absolute savings (from 0.3 percent to 1.1 percent, average 0.5 percent) are higher than 1 percent in only one case. In the view of the employees of that enterprise, they resulted mostly from shortages of work forces or from inability to hire them, rather than as an outcome of intentional savings of labor.

As compared with the previous year, the numbers of employees were reduced (on the average by 0.8 percent) in 1981 in all organizations under study, and this tendency continued largely in the plan for 1982 (average reduction 1.0 percent). However, in most cases it is not an outcome of absolute labor savings (either in the plan or in fact).

The system of organizations under consideration has thus achieved slightly better results, particularly in absolute labor savings and in comparison with the past, and in relative savings in comparison with the state plan. Therefore, the significance of the study in such a relatively limited system of organizations must be viewed with some reservations. The causes of negative tendencies and results may appear here less distinctly than their effect on all of our national economy.

The above-mentioned results have many objective and subjective causes.

Among the objective aggravating effects, the enterprises include in particular:

- a lack of clarity as concerns future development; the enterprises regard the lag in development as temporary and try to maintain the current status of labor for projected future development;

- the necessity to hire graduates and foreign workers for jobs which exceed current needs;

- technical economic effects (proportional savings of labor are impossible with lower operation in the production of equipment and in line production; labor-saving problems in auxiliary operations due to unreliable deliveries by specialized organizations, irregular supply of material and technology, etc.);

- psychological inhibitions of managers unwilling to admit at a later stage of the implementation of the plan production resources they had intentionally concealed in the preceding stage;

- sociopsychological inhibitions of managers against dismissing employees for fear of their assignment to new, possibly less desirable jobs.

The study could not estimate and objectify the extent of such effects and in some cases, even the possibility of their intentional exaggeration. On the other hand, it may be presumed that these effects are actually interacting to some degree.

Along with the above-mentioned aggravating effects, however, the inadequate effect of labor-saving measures has without any doubt contributed to the results.

The inefficiency was evident in particular in the system regulating wages payable in the following aspects:

--in the limited possibility to objectify the centrally individualized specifications of the tasks of the plan in production, labor productivity and norms for wages payable which have been derived from those tasks; in the limited opportunity to stabilize in the future specified norms individualized in this manner. In the period under study not only were they not stipulated for the whole Seventh 5-Year Plan but were changed in most cases in the annual plan, even contrary to its instructions. For that reason, they could not be applied sooner than in the final stage between the specifications of the state plan and the creation of the economic plan of organizations;

--in the excessively complex and incomprehensible systems (creation of wages payable in separate units; various superstructural factors replacing especially insufficient accuracy and flexibility of prices -- such as determining indicators, additive and deductible items, etc.). It is, therefore, difficult to estimate the resultant fulfillment, much less to affect it by intervention during the implementation of the plan (especially the monthly plan). Thus, enterprises may react to possible deviations only after the fact, and this risk compels them to maintain an absolute standard of wages payable, which in turn hinders the stimulating effect of the regulations, including the labor-saving measures;

--in high demands on savings of labor and in their risk inherent already in the plan, which are disproportionally higher than in the implementation of the plan and then their preferential treatment;

--in the intensity of the measures, which is not commensurate to the changed situation; in particular it cannot suppress the effect of the vague perspectives and sociopsychological inhibitions.

The labor-saving effect of economic incentives for enterprise subdivisions and individuals was also inadequate. The regulations of the incentives are being implemented in different ways. Only 5 out of the 22 organizations under study have introduced their own regulations at an even earlier stage. New regulations (recommended in 1981 by the FMPSV) have been specified and applied in seven other organizations; only four organizations achieved positive results based on the application of those regulations, however, in two of them labor savings were used to transfer employees to other workplaces within the same enterprise and thus, in fact, absolute savings of labor for the whole enterprise were noted in no more than two instances.

The experience thus far may be considered preliminary in view of the brief period of its application. However, these forms of incentives are thus far being applied from above (beginning with the foreman, or as the case may be, by means of rationalization teams) to obtain the planned savings or to replace

the lacking employees when fulfilling the plan. Nevertheless, such forms have not generated initiative from below (i.e., from employees and teams).

In addition, the perennial problems in updating standard labor consumption may also be caused by factors of wage ceilings stemming from some unresolved relations between the growth of productivity and earnings, since the tariff policy is not flexible enough (the wage tariff is lagging behind the growth of wages).

Along with the still insufficient effect of subsystems in the whole system of management (i.e., regulation of employment and wages), there appeared the limited potential of their isolated effect, without any comprehensive increase of demands on the climate of the enterprises to control all economic policies and the whole system of management.

#### How to Proceed Further

Thus far, the above-mentioned data are only preliminary and conditional. The causes of the inertia of the extensive tendencies existing thus far in labor management and of the inertia in the attitude of the enterprises need to be studied further and analyzed in greater depth. Nevertheless, our experience is noteworthy because it gives sufficient reason to think about the next step toward intensive management of enterprises as well as of the central management.

The ascertained shortcomings and difficulties should not cause retreat from economic stimulation of rational attitudes by the enterprises in labor management. For that reason, this motivation should not be replaced again with predominantly administrative policies of management. The proper method is to make the Set of Measures substantially more effective rather than expanding it further.

As for the labor-saving measures under consideration, in my opinion the following issues should be studied further and specified in detail:

--the method of upgrading the effect of regulating wages payable so that it would help exert greater economic pressure on efficiency and productivity (with more intensive absolute labor savings and with a more flexible change of the factors of production) and at the same time, cope efficiently enough with any potential risks of economically unjustified extensive wage development. The solution should be sought mainly so that, instead of depending on individualized specifications of the plan, wages be correlated with the level or dynamism of efficiency and productivity on the basis of regulations unified as much as possible (in discussions in the USSR and other socialist countries this approach is called higher standardization of the system, or creation of a parametric environment in the management of enterprises). By the same token, it is imperative to seek opportunities for more fundamental simplification of this system;

--how to efficiently regulate wage systems in the future, particularly by tariff policies and principles of rewards granted to managers. It seems that

in order to overcome the effect of obsolete wage tariffs on the obsolescent standards of labor consumption, it may be desirable to reassess the options for rendering the tariffs more dynamic -- by frequent reviews of them and by making them more flexible (to facilitate and increase in some way the expansion for continuous transfer of bonuses for tasks fulfilled);

--to consider the efficiency of applying the developing partial support of certain auxiliary labor resources -- especially persons of retirement age, in auxiliary jobs, or of volunteer work teams, etc. -- to put pressure on work discipline, efficiency and quality of labor, and to promote and stimulate further the interest of those persons in employment, so as to involve them more in work than it would be feasible with full employment of persons of productive age. When dismissing individual employees, it is necessary to follow at the same time all principles rating employees on the basis of their efficiency and quality of their work; however, another appropriate (although possibly less attractive) job must be secured even for less efficient released employees of productive age;

--to consider, in view of the revoked mandatory limits on the number of employees, whether it is appropriate to regulate employment in a differentiated way by regulating labor recruitment (release of labor forces to selected preferential and developmental sectors) and by focusing preferential measures consistently on a limited group of priorities only.

To upgrade the efficiency of all labor-saving measures it seems imperative to create at the same time broader, more general preconditions, which may be sought in particular in two directions:

--how to generate overall a more challenging atmosphere in the attitude of the enterprises and their management and how to upgrade their efficiency while expanding the latitude for their initiative in that demanding climate, as concerns both general economic policies (particularly by planned creation and continuous restoration) of balance not only in foreign economic relations but also in every area of domestic trade in demands for labor forces and their resources) as well as an overall higher development of the planned management system, or as the case may be, of the Set of Measures (especially by more thorough application of the khozrashchet system, including the advantageous effect of world criteria of efficiency on producers who are granted more authority);

--how to develop the social security of our working people in agreement with the modern concept of structural changes, i.e., how to provide appropriate new jobs for employees dismissed from stagnating enterprises (particularly by systematically intensified structural changes, such as accelerated development of lucrative production for export with stable sales and material supplies, by more economical utilization of domestic raw materials, by consolidation of preprocessing capacities in enterprises with good prospects for the future, and especially by a faster development of services for pay). In this direction, how to follow, and if need be, improve material and social conditions of the dismissed employees (thus, to foster interest in labor standards not only in



the case of workers whose higher productivity had made it possible to dismiss some of the employees but also in the case of employees dismissed in this manner).

Our experience and information gained thus far in implementing labor-saving measures has failed to this day to offer convenient suggestions, nevertheless, they provide adequate impulses for further inquiries and thorough review.

9004

CSO: 2400/47

## CZECHOSLOVAKIA

### STATE PLANNING COMMISSION MEMBER VIEWS ENERGY SITUATION

Prague HOSPODARSKE NOVINY in Czech 29 Oct 82 p 3

[Article by Eng Miroslav Cibula, CSc., State Planning Commission: "More Electricity and More Economical Technology--and the Reverse"]

[Text] The unfavorable development of expenditures for energy sources cannot be halted simply by economizing within the framework of the current structure of their consumption. Far more important is the motivated choice of rational guidelines for the long-range development of the Czechoslovak power-generating industry such as will produce the maximum possible economic effect throughout the entire chain, from production, through processing, to utilization. Conserved energy is justifiably considered the "cheapest source."

#### Fuel Energy

This does not mean, however, that the structural and qualitative reconstruction needed in order to adapt to new conditions will be an inexpensive affair. Through a policy of conservation we can save up to 30 percent of the increase in energy consumption estimated through the year 2000. Approximately one-third of this is through very easily achieved reductions related to the elimination of unjustified wastage of energy. Another third can be achieved by technological and organizational measures requiring only modest expenditures which will pay for themselves in a short period of 2 to 4 years. The remainder is potential savings, which require far greater expenditures and can be achieved through technological innovations in energy management and in the appliances using this energy.

In the European CEMA states (not counting the USSR) the energy required for production of the national income decreased 1.1-1.3 percent annually throughout the seventies. An analysis of the indicators for the 1981-1985 economic plans shows that raising the national income in the European states will be accomplished 30 to 40 percent (earlier [analyzed] as 25 percent) by decreasing energy demand, and 60 to 70 percent (earlier 75 percent) by increasing energy consumption.

A dominant position in the long-range reconstruction of the fuel-energy complex will be occupied by nuclear energy and coal, as primary sources, and by electricity as an energy carrier. Electrical technologies are expected to displace petroleum products from industrial manufacturing technologies. All decisive structural changes expected in the long-range energy balances are associated with a pronounced increase in the production of electrical energy, since only by converting to this common denominator can we utilize alternative primary sources, including solar energy, geothermal energy, biomass energy, and other nontraditional sources. These will, by the way, not be used to a significant extent until the next century. In the year 2000 their share will be only a few percent.

#### Distinguishing Features of the Czechoslovak Power Industry

These are neither objectively nor subjectively favorable. We must include among them, namely, a very high level of consumption of primary energy, equal to about 7 TmP [tons of standard fuel] per capita, which puts us in third to fifth place in the world. The development of the Czechoslovak power-generating industry in the past was determined by a need to rapidly provide the economy with energy sources in a manner corresponding to the type of industrial construction chosen. Energy-demanding branches of industry formed a significant percentage of the total. Our consumption of fuel and energy increased on the average 5.7 percent yearly in the fifties, 3.9 percent in the sixties, and 2.4 percent in the seventies; [Section apparently dropped in publication]

- lower consumption of refined fuels, particularly oil, and high consumption of coal as a primary energy source, in comparison to the level of these indicators for comparable industrial states;
- lower consumption of electrical energy as a final form of energy consumed than in comparable industrial states;
- in contrast to the world situation, very limited capacities for further increase in the mining of domestic fuel coal;
- only the initial stages in the development of a nuclear power industry, which at present, despite definite success, is providing slightly under 2 percent of the primary energy consumed and approximately 7 percent of the electrical energy consumed;
- a great dependence on imports of energy sources, which constitute up to about 40 percent of primary energy consumption.

Of the socialist states, only the GDR had, in the past, a greater per capita energy consumption than the CSSR, while, for example, in the USSR the per capita energy consumption was about 20 percent lower and in the Mongolian People's Republic up to 50 percent lower. In the countries of Western Europe per capita energy consumption is 15 to 20 percent lower than in the CSSR, but for each unit of energy used the gross national product is 15 to 100 percent higher than in the CSSR (depending on the conversion method used).

## Is Rapid Change Possible?

It will not in the foreseeable future be easy to basically alter the backwardness, as compared to the leading countries, of the economic effect of the Czechoslovak energy base. From the standpoint of time and money, it seems most reasonable to work on improving norms of consumption, decreasing energy wastage, etc. As regards the source sector of our energy balance, we must continue to orient ourselves toward the complete utilization of domestic coal, with increased contributions by lower grades. This will have an unfavorable effect on the amount of energy needed to refine fuels and on the efficiency of energy conversion. In addition, we must plan on a long-range unfavorable basic difference in quality between Czechoslovak energy bases and those of most industrially developed countries, consisting in the fact that the major part of Czechoslovak energy consumption is met by coal. Our power-generating industry has always deviated markedly in this way as regards the world development of the power-generating industry. While in 1960 only 38 percent of world energy consumption was generated by coal and 41 percent by oil, in Czechoslovakia coal provided 88.6 percent and oil only 6.7 percent of energy consumed. In the early sixties close to 12 percent of our domestic energy requirement had to be met by imports. In this case, roughly half of the fuel imported was crude oil for the chemical industry and for the production of fuels.

The dynamics of domestic energy consumption was affected even in the sixties by the gradual exhaustion of the easiest methods for the extensive development of domestic coal mining. The further development of fuel coal mining in the CSSR is increasingly more often not only running into barriers related to a worsening in conditions for extraction, but is also limited by an unfavorable ratio of yearly mining output to net geological reserves, in particular in the case of fuel lignite, for which the ratio is about 1 to 30-45. This means that assessed reserves of this fuel will, without increased expansion, be exhausted in approximately 30 to 45 years. For this reason, a gradual decrease in the production of electrical energy in coal condensation electrical power plants is planned for the near future.

In the period from 1960-1980, there was an increase in imports of crude oil, practically all of this coming from the USSR, of from 2.3 million tons to 19.6 million tons [annually], i.e., an 8.5-fold increase. In the late sixties, we began to import Soviet natural gas, of which we now buy approximately 8 billion cubic meters [yearly]. To adjust the Czechoslovak energy balance we have also had to import significant quantities of bituminous coal and electricity. At present, we import annually about 5 million tons of bituminous coal and 4 billion kWh of electricity. Our energy base can help to pay for these imports only by exporting 4-5 million tons of coking coal and coke [yearly]. Most of our payments are met by exporting the output of the processing branches of industry. in particular the machine-building industries.

Through such development, we have increased the percentage share of imported energy sources in Czechoslovak consumption of fuel and energy to approximately 40 percent. Although such great dependence on imported sources

is not exceptional, we cannot, in view of development of world prices and our abilities for payment, count on future continued increase in the share contributed by imported fuels.

### Coal and Nuclear Energy

Although the past 20 years have witnessed an extremely rapid increase in the importation of refined fuels, coal has retained for our power production industry a far more important position than it occupies in the world as a whole or in most developed states. In 1980, coal met only 24 percent of world energy requirements while, the figure was 61 percent for our country. As regards consumption of fuel oil, the situation is reversed. The Czechoslovak power industry, which uses 25 percent oil, is far below the world ratio, which is approximately 45 percent. The world level of oil consumption has, however, been affected by a decline in mining and marketing of oil resulting from the oil crisis, which in 1972-1980 led to a 16.5-fold increase in its world price. The consumption of crude oil in the CSSR, in contrast, rose until the early eighties, a situation resulting in part from more favorable price conditions for its import from the USSR within the framework of long-term agreements. We must, therefore, in considering future economic demand, count on a decline in available sources of imported crude oil.

It is very unlikely that there will be increased mining of domestic crude oil. At present we are meeting only 0.5 percent of demand with our own oil.

Considering the situation, the Czechoslovak power industry will have to resign itself to the long-range retention of a high percentage share of coal in consumption. This manifests itself in technologically and economically more demanding energy conversion and in a need to leave a considerable fraction of our coal in final consumption forms of energy. It follows from observed developmental trends and from published forecasts that even a return to increased coal consumption by a number of countries will not affect in any basic way the significant differences in the roles of coal and oil in the energy balance distinguishing the CSSR from the industrially developed states.

As regards our energy situation, the only suitable long-range alternative energy source is nuclear energy, this being from the viewpoint both of possible extent of energy contribution and of the advantages of concentrated construction of nuclear power production plants (nuclear power plants, nuclear power plants with heat extraction, nuclear heating plants).

It follows from an analysis of the developmental conditions of all possible nonnuclear energy sources, for the period through the year 2000, that, assuming intensive rationalization and a decrease in [rate of] growth of energy consumption, to a level half what it is at present, that we will need to provide for an 12 to 15 percent average yearly rise in use of nuclear energy. The production of electric energy in nuclear power plants must increase at approximately the same rate, since the share of nuclear energy in providing heat will be minor.

The intensive growth of electrical energy production in nuclear power plants will, then, be a decisive structural change in the Czechoslovak energy balance both through the year 2000 and in the following period. This structural innovation will manifest itself more slowly in the final consumption of energy because, in parallel with an increase in production by nuclear power plants, there will be decreased utilization of thermal power plants operating on fossil fuels. In addition, there are also plans for constructing several coal condensation power plants for more rational combined production of electricity and heat. In the near future, as more nuclear power plants are put into operation, the consumption of refined fuels, fuel oil and natural gas in traditional power plants is to decline to a level determined by the need to stabilize the burning of lower-grade coal. The power industry also plans on decreasing the consumption of coal. By 1985, over 1 million TmP will be liberated from the production of electrical energy for use by other energy sectors. By 1990, it should be possible to increase the amount of fossil fuels liberated to 4-6 million TmP per year, depending on how the construction of nuclear power plants progresses. By the early nineties, nuclear power plants should be producing more electrical energy than those operating on fossil fuels.

#### Undervalued Electrification

The transition to nuclear energy will create the preconditions, as regards the future energy balance of Czechoslovakia, for a long-range speedup of structural changes involving electrification and for an increase in the share of modern manufacturing electrical technologies and electrical appliances. This trend will fully satisfy the requirement of scientific and technological progress and the growth of national labor productivity. The present relatively low efficiency of the Czechoslovak energy base is due also to a rather great lag in consumption of electrical energy behind that of primary energy. While Czechoslovak per capita primary energy consumption has reached practically world peak levels, our per capita consumption of electrical energy is about 20 percent lower than in comparable states with a greater efficiency of energy consumption.

The choice of an optimal approach toward electrification in the CSSR is becoming one of the most important goals of long-range developmental plans and programs. Scientific and technological progress is oriented toward symbiosis and parallel utilization of natural gas and electricity in providing low-potential heat and also toward increased application of electrical energy in nonstationary power engineering, primarily in municipal but later also in individual transportation.

The unfavorable development of economically high-demand energy sources has increased pressure for more rational utilization, which, together with a slower rate of economic growth, has in recent years resulted in approximately a 2 percent annual decrease in the [rate of] growth of consumption of primary sources in the CSSR. This suppression is nevertheless still not sufficient. In the second half of the seventies, the Czechoslovak energy requirement for production of the national income decreases 10 percent in volume but increased 33 to 50 percent in monetary value. While development

during 1980 required 21 TmP less per billion Kcs of national income than in 1975, the expenditures for acquiring this smaller quantity of energy sources were at least one-third greater. Without basic changes in these unfavorable trends, expenditures for energy acquisition would gradually drain an intolerably large share of produced values.

As regards the resource sector of the Czechoslovak energy balance, we must count on a much more rapid long-range rise in expenditures to obtain a unit of energy from domestic and imported primary energy sources than in the case of expenditures related to the implementation of rationalization measures. Analyses indicate that our cost per unit of energy conserved will in the period to come be seven, and later about four, times lower than the cost of new sources of energy.

Considering the relatively high energy consumption of our national economy and our inability to basically affect the further rise in the cost of providing energy sources, the focus of our energy problem has thus shifted perceptibly to the area of rationalization of energy consumption and upvaluing of utilized energy sources through structural and technological innovation in the economy.

[Photo Caption]

Tesla Strasnice produces a wide range of transmission and telemechanization devices used for the construction of automated control systems in the power industry and in other sectors. These devices are used to transmit telemetry data, long-range signals, and commands for telecontrol of unmanned plants. They also make it possible to maintain equilibrium between energy production and consumption.

9832

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MARTINKA URGES REDOUBLED PRODUCTION EFFORT AT YEAR'S END

Bratislava PRAVDA in Slovak 2 Nov 82 p 4

[Article by Karol Martinka, deputy chairman of SSR Government and chairman of the Slovak Planning Commission: "Let Us Make Full Use of Available Potential--More Effective Activation of Manpower and Resources at Year's End"; passages in slantlines printed in boldface]

[Text] The approaching end of the year literally coaxes us to ponder how well we are managing to accomplish the tasks which fall from the overall CPCZ economic and social policy to individual sectors and are incorporated into the plan for 1982. One-sixth of the available annual working time is still ahead of us, i.e., a time span in which much can be accomplished to catch up with what was missed, much can be improved, eliminated, the impact of unsolved problems can be alleviated, etc. There is still sufficient time to augment the good results of painstaking and selfless efforts. At each place of work, we must particularly ponder the problem of where to focus attention, where to concentrate efforts to enhance our successful efforts in accomplishing the promulgated program.

Intensive Approach--A Permanent Process

However, first we must be aware of what criteria, what "meter" we are to use as a measure of success. All of us everywhere must at the same time take into consideration the following facts given by the specific features of this period of the year:

/First of all/, we must realize how uncompromisingly and strongly we are exposed to the complexity and demanding nature of the prerequisites for economic development. New conditions and increased demands are hard facts. Stressing them is not to provide justification or excuses, but primarily and solely not only to make us aware of them and thoroughly familiarize ourselves with them and, what is most important, /that we seek an active approach toward overcoming them/.

In formulating the plan for the current year, we already had to face the fact that in view of the high social cost and, in some cases, actual physical lack of access, in the current year we have absolutely lower sources of a number of raw materials, fuels and energy (metals, crude oil and, thus, also diesel oil and fuels, etc.) and, further, last year's yield of grains and cereals was lower by 16 percent, etc.



As early as last year, but particularly in the course of the current year the national economy as a whole, and specifically some sectors of industrial production, felt the hard impact of problems resulting from the state of the markets of nonsocialist countries, increased competitiveness, consequences of protectionist and downright discriminatory measures by West European banks and customers and the particularly harsh financial/foreign-exchange embargo applied against us under pressure from the United States. This necessitated a more systematic establishment of the direct relationship between allocation of foreign-exchange resources and actual exports to those markets for each sector and VJH [economic production unit].

These new, more complex conditions are a fact of life that we cannot change; what is of decisive importance, however, is that we learn how to face them, how to overcome them, that we do not passively continue treading the same old path as if nothing new had happened. It is of decisive importance that we, as the saying goes, know how to adapt to those conditions, not passively, but actively. That we find more effective ways for overcoming them by activation of our resources and talents accumulated from successful development accomplished so far. That much we can manage to do.

/Second of all/, we must realize that the inevitability of the transition, stressed by the CPCZ congress, of the economy to an intensive path of development which is to create the conditions for continuing progress is not just some seasonal trend, not just some "emergency" solution for some problems and that no success awaits those who might think that it is merely a temporary exigency which will go away by itself if we wait long enough. Such thinking would be tantamount to committing a serious ideological error. It involves a process which is inherent to an economically advanced society in the period of scientific and technological revolution, a process inherent to the socialist way of developing the national economy, the basics of which in the area of labor value added and past labor input were formulated by K. Marx and, in the area of productivity of labor, the higher level of which stands witness to the advantages offered by our social system, by V. I. Lenin.

The intensive path of development is a continuing process, and the sooner and more actively one follows it, the easier will be his efforts. At the same time, it is a process involving the society as a whole, concerning every one of us, personnel in production and nonproduction sectors, labor unions; man as creator of values as well as man as consumer of values. Everyone must find his own place and role in it.

/Third of all/, we must realize that it would be a particularly unforgivable and gross mistake if our perception of the current year's tasks, dynamics and trends were too simplistic, if we interpreted the matter as a mere slowing down in the rate of development due to the complexity of the situation. Some quantitative data could mislead us to such a viewpoint. The complexity and demanding nature of this year's tasks is given by the fact that /we set for ourselves the goal of accomplishing such a regrouping of manpower and resources as would create the prerequisites for more effective utilization of our potential for development, that by the improved efficiency of our own efforts we moderate the effects of limiting factors, lower economic inputs/.

We want to accomplish these qualitative goals in the current year without overall increases, but while maintaining the volume of national production, as overall industrial production is to increase by 0.4 percent, agricultural production by 5.2 percent with a reduction in basic construction projects tied to a rate of investment reduced by 5.8 percent. The key emphasis is on the improved efficiency of labor which is to become reflected in generation of the final effect--the national income, as well as in creation of conditions for a balanced development.

#### How We Are Doing

/In industry as a whole, we not only succeeded in meeting the overall production quotas/, in 9 months we accomplished 73.7 percent of the year's tasks (73.4 percent last year, with one less working day) and, in comparison to last year, production increased 0.8 percent, /but even more important is/ that, except for a few exceptions, we are succeeding in achieving the programmed structural reorganization of production which is reflected in the unprecedented /differentiation of the dynamics of development in individual sectors/.

Development is significantly faster in sectors with a higher measure of effective utilization of raw and processed materials and energy. Machine-building production increased 4.8 percent, that of the electrotechnical industry up to 7.8 percent. Similarly, that of the health industry increased 7.4 percent, generation of heat and electric energy--thanks mainly to trouble-free operation of nuclear power plants--increased 4.3 percent (while limiting generation of electric energy based on conventional fuels).

In keeping with the plan, there has also occurred a slowdown of production in sectors highly demanding on raw materials and energy, namely in the chemical industry and in ferrous metallurgy (approximately 2 percent decrease), in nonferrous metallurgy (4.8 percent decrease), in production of construction materials (1.2 percent decrease).

Sectors processing domestic raw materials show differing results. Thus, in the woodworking industry, even though pulp-mill production increased 9.7 percent and that of the woodworking industry by 2.4 percent, quotas for 9 months have been met only 98.4 percent. Planned quotas in the food industry are being met, but as a result of last year's crop failure the volume is 3.5 percent lower. Planned production quotas are being met in the remaining industrial sectors.

Structural reorganization of production represents the decisive factor that will make it possible to achieve the planned lowering of demand for materials and help achieve a higher level of effective utilization of the raw-materials input. This is reflected not only in relative savings of materials, but also--and this is of importance from the viewpoint of generation of resources--in achieving a higher volume of net production. For example, in industry with an 0.8 percent increase in the volume of production, net production increased 5.1 percent. However, the results could have been even better if it were not for the lagging woodworking industry, of its

individual enterprises (a total of 50), be it due to emergencies and breakdowns of production equipment, inadequate adaptation of the structure of production to the demand, or mutual failure to meet subcontracts.

The industry is managing to achieve results conducive to creation of conditions for an overall balanced development. With growth of industrial production by 0.8 percent, final deliveries increased 4 percent in 9 months. From that amount, deliveries for export to socialist countries increased 11.8 percent, those to nonsocialist countries 9.1 percent. The volume of planned deliveries is being met for the domestic market and for investment construction. A positive trend is also being attained in improving the technical, economic and utility parameters. Thus, e.g., the value of new products increased 25.5 percent in comparison with the first half of last year, value of top-quality products by 16.3 percent and value of products of an advanced technical level by 24.9 percent. It must be stated, however, that their share in total production is still small.

#### Where to Focus Attention

It could appear as though everything went smoothly and positively, that there are no problems, that there is nothing to improve. That, however, is not the case. We must perceive the nature of the trend that is being achieved, that it is on the whole positive and in spite of all the complexities we encounter every step of the way /there is no room for pessimism. However, at the same time there also must be no room for self-satisfaction with the attained results of labor/.

Work teams in enterprises that still lag behind in meeting the planned quotas should once again ask themselves what can be done toward elimination, or at least reduction of shortfalls in the required volume of production. This involves primarily the woodworking and pulp industry, some machine-building enterprises, but also some enterprises in the textile and food industries.

Thus, e.g., in our largest, newly-built /pulp mill in Ruzomberok/ the point will be to stop the existing shortfall, caused by problems in startup of production and initial breakdowns, from increasing, but decrease it--not only by the ongoing selfless efforts toward keeping up production in the old paper mill scheduled to be put out of operation--by having the personnel in the new plant systematically maintain technological processes, work discipline and care for production equipment to maintain the trend and the level of production to be achieved in the remaining days. /Personnel of the pulp mill in Zilina/ are faced at year's end with an acid test and verification of the professional prowess of all personnel in switching to a new technology of processing foliage fiber materials. That will call for mobilization of all the plant's personnel, but also of supply organizations for accelerated completion of work on equipment.

/In the woodworking and furniture industry/ it will involve a challenging struggle against the consequences of breakdowns and emergencies as well as reacting correctly to marketing problems which in 9 months caused a production shortfall in the amount of Kcs 145 million. It will involve installation and final assembly of technological equipment in cooperation with

suppliers, an accelerated startup of new capacities by improved quality of organizational and management efforts. This involves specifically the saw mill and particle-board-production plant in Bucina Zvolen, production of laminated boards and palettes in the Smrecina woodworking combine in Polomek and the sawmill in the Saris woodworking combine. It is further imperative to introduce continuous operation on production lines for particle boards in /Drevin and Smrecin/ as well as increased use of shift work on equipment that is limiting followup production, increase production of furniture types in demand, production of plywood boards and other products. By improved care for equipment, minimize production shortfalls caused by breakdowns, particularly in production of pressed fiberboards.

While the machine-building and electrotechnical industries as a whole are achieving good results, be it in the changes made in structure of production, in technical and economic characteristics of products, improved utilization of metals and in increasing their capabilities for exports, it still must be admitted that they do not make full use of expedient and flexible dealing with the many problems encountered in startup of new productions to meet the requirements on capacity, materials and marketing. These are the problems at which attention should be focussed at year's end, specifically startup and acquisition of proficiency in new production of components for the primary circuit of the nuclear power plants in the /Slovak Energy Machinery plant in Tlmace/, potential for expanded marketing and exportation of refrigerators, washers and household fixtures from enterprises of the /Strojsmalt VHJ/, providing a steadier supply of complementary elements and subcontracts for the plants /Tesla Orava, Tesla Bratislava, Tesla Vrabie and ZVT Banska Bystrica/. Attention must further be paid to preparation and accelerated startup of capacities and marketing (and readiness of users) for the production of robots and manipulators in /VUKOV and Industrial Automation Plants Presov, the Bratislava Automobile Plant in Bratislava, Heavy Machinery Plant in Detva, Strojsmalt in Nizny Medzev and Vihorlat in Snina/ as well as production of solar energy collectors, electric motors and air-conditioners in /Elektrosvit in Nove Zamky/ etc.

Overall saturation and diminished marketing possibilities on foreign and domestic markets underline now more than ever the inevitability of development of /production capable of meeting needs even under complex conditions. It is inadmissible to turn out products for storage and it is downright harmful to use raw and processed materials that had to be imported for such production/. That leaves a wide field of action open for improvements in management. Industry and construction are tying up more national resources in supplies excessive than called for by the /planned turnover/, amounting to almost Kcs 1 billion. This makes it inevitable not only to prevent continued wasting of values, but to provide for accelerated release of these resources for dealing with problems to better meet the needs of foreign trade and of the domestic market.

This year's developments on the /markets of nonsocialist countries/ are, in comparison with the preceding period, unusual in their nature. There is an increased manifestation of discriminatory elements. There are cases of canceling concluded contracts (for furniture, leather footwear, fibred wood and others) in the Exico, Drevounia, Centrotex, Strojexport foreign trade

organizations [00Z], or those of foreign customers requesting postponement of expediting their orders, etc. Even at year's end we must /avail ourselves of all forms of advantageous cooperation with these countries, particularly in relation to conditional transactions, and improve to an optimum extent adaptability of our production to the demands of foreign customers/. We will have to continue to figure on controlling imports from territories to which we are unable to export. /It is impossible to rely on an expectation that somebody else will generate foreign exchange that could be used by others to pay for imports/.

According to the results obtained so far, this year's plans for exportation to nonsocialist countries are in jeopardy particularly in the case of the light and woodworking industries and the construction industry. All the resources at our disposal had to be used in the current year to provide for continuity of production. Personnel of the Ogako VHJ, Slovakotex, the wood-working and furniture industry, as well as others, that such an approach to the solution of problems must not recur. What and how much they will produce depends exclusively on their ability to come up with quality production and the potential for selling their products on nonsocialist markets, and not any other use of their production. That is the basic prerequisite for balanced development in the area of foreign-trade economy.

#### Needs of the Domestic Market

Of no lesser importance is creation of conditions for a balanced domestic market in volume, structure and quality of consumer goods. In total volume, industry supplied the domestic market over 9 months with goods amounting to Kcs 28.7 billion in wholesale prices, which represents 73 percent of the quota for the year. It is relatively less than last year (73.5 percent) and the cause was imbalance in meeting of tasks by individual sectors. Thus, e.g., the electrotechnical industry met 71.4 percent of its deliveries for the year and general engineering only 69 percent. However, that does not mean that meeting of deliveries by other sectors is any cause for satisfaction.

Production and trade organizations must be more active in developing their contacts and be more creative in continued meeting of their assigned tasks. That involves essentially the following:

- produce and supply the domestic market with more high-quality and fashionable textiles, footwear and other products with high utilitarian properties;
- produce at least 5 percent more of products from the line of the so-called "shortage products" in comparison with other goods;
- introduce production of consumer products in production organizations which up to now have not been turning out such products.

Production organizations must become much more flexible in responding to the needs of the domestic market and trade organizations must better meet the needs of the populace by improving the quality of their service. For instance, trade and agricultural organizations should make full use of this

year's good crop of winter fruit and potatoes. This becomes even more urgent in view of the fact that the foreign-exchange situation does not make it possible to increase imports. It ought to have a literally alarming impact on the Fruit and Produce Trade Organization that it is lagging behind in the planned volume of sales by more than Kcs 50 million, Kcs 22 million of it in September alone, and that the level of fruit and produce sales is 6 percent lower than last year's level.

## Agriculture

Agriculture is faced this year once again with a complicated situation. It can be expected that tasks in animal production, adapted to the fodder situation, will be met, or even exceeded. For the last 9 months, e.g., the plan for procurement of animals for slaughter has been met 101 percent, procurement of eggs 103.1 percent, but procurement of milk only 97.1 percent and that of poultry 96.8 percent. However, due to inclement climatic conditions, there will be a shortfall in meeting the plan in crops of grains and cereals, oleaginous plants, sugar beets and some other plants. Thus, foreign-exchange resources will have to be generated in other sectors of the national economy for importation of fodders and oleaginous plants.

The key approach to making up for the shortfall in production, particularly of grain fodders, must be looked for and found in agricultural enterprises. Much can still be done toward that end. From this viewpoint, it is imperative to /minimize losses in harvesting the plants that are still in the fields/, mainly sugar beets, corn for seeding and mixed fodder made from stubble remaining on fields. This spring's clement weather makes it possible to /prolong grazing of horned cattle/. Much depends on the quality attained in preservation of sugar beet cuttings, potatoes, harvesting and utilization of corn. In order to reinforce the fodder base during the spring months, it will be necessary to systematically plant intermediate winter crop staples.

Economic utilization of fodders calls for undertaking selection of horned cattle for breeding and elimination from the herd of animals with an unsatisfactory state of health and heifers unsuitable for further keeping. Successful accomplishment of tasks in animal production in the coming year will depend on /improved economy in the use of grain fodders/ even during the current period. Nevertheless, the objective is not to save fodders at any cost. The point here is /not to sacrifice intensity of animal production in spite of lower consumption of fodder/. This can be accomplished by improving the systems for management of animal feeding, feeding technologies and techniques, improving the quality of caretaking and better utilization of all accessible sources of fodders, particularly better utilization of straw, corn and refuse from the food industry and other nonconventional sources. There are many positive examples which show the extent of unused internal resources in agriculture. It is imperative that they be used in the interest of increased self-sufficiency and providing nourishment for the populace.

## Investments and the Construction Industry

With an overall reduction in the extent of investments, the plan envisions additional steps in the manner of implementing construction projects, particularly in the qualitative area. The results attained over 9 months create the prerequisites for not only meeting tasks in the current year to the planned extent, but also in regard to its structure, i.e., investments in machinery and equipment as well as building operations. Over 9 months, 68.9 percent of the total volume planned for the current year was accomplished (66.7 percent last year), of which 70.4 percent accrued to construction operations (69.3 percent last year) and 66.8 percent to machinery (63 percent last year).

There will also occur a reduction in simultaneously ongoing unfinished construction of projects with budgeted costs exceeding Kcs 2 million, thanks to a more systematic regulation of the extent of startups and their reduction. A higher concentration of capacities has been achieved for priority construction projects which accounted for a larger share of building operations than the total volume of construction--having completed 71.2 percent of the year's quota, with 73.2 percent in building operations.

Nevertheless, concentration of manpower and resources on key construction projects still has not reached the desirable level and that retards attainment of the objective of construction--acquisition of capital assets. From the year's quota of Kcs 46.5 billion, we acquired in the first half of the year only a little above Kcs 12 billion worth of capital assets.

It is imperative to achieve higher utilization of manpower and significantly improve meeting of quotas on those construction projects which by the end of September showed a substandard volume of building operations. This applies, e.g., to the plants /Chemicalceluloza in Zilina/--hygienic paper products (53.9 percent), overhaul of the /sugar factory in Trebisov/ (40.5 percent), /central waste-water processing plant in Bratislava/ (48.9 percent), /malt plant in Hurbanovo/ (53 percent), fine glass-fiber production plant of /Skloplast in Trnava/ (63 percent) and the pharmaceutical pavilion of /Slovakofarma in Hlohovec/ (62 percent). The imperiled deadlines for launching many capacities into operation or completion of construction projects can be blamed on construction personnel as well as on suppliers of machinery and equipment and their installation.

Efforts of construction personnel must be concentrated primarily on the /Industrial Construction Plants in Kosice/. They hold the key to significant improvements in accomplishing the construction of key projects, such as are /POP II in the Chemical Plants of Yuray Dimitrov in Bratislava, the Moravian Electrotechnical Plant in Michalovce, the technical rubber production plant in the Slovak Chemical Plant in Hnusta, the Plywood Plant in Zernovice/ and the already mentioned /Chemicalceluloza in Zilina/. Highly effective mobilization of unused internal resources in the construction industry is required primarily for priority projects, increased output through utilization of intensive factors, as well as a high degree of mutual cooperation and collaboration of all participants in the projects. That is the correct approach to meeting of quotas.

Our construction industry is also achieving more positive results than in the past in meeting another task, construction of public utilities and facilities in communities. However, to successfully meet the year's quota, the /Structural Engineering VHJ/ and its enterprises must concentrate their efforts on providing public facilities and eliminate the serious lag in building of public utilities for some residential projects. The ongoing laggard dealing with problems relevant to heating sources, engineering networks and other public utilities is jeopardizing the turnover of communities in /Liptovsky Mikulas, Donly Kubin, Martin, Ziar and Hronom, Kosice and in Banska Bystrica/. So, a lot remains to be corrected and caught up with at the year's end in investment construction as well.

#### Reducing of Costs

A prerequisite for continuous development of the national economy is /systematic achievement of savings in present and past labor input, overall improvements in efficiency/. Achievement of overall generation of society's finite sources calls for reducing the demands on materials and energy and with lower inputs, or smaller increments in inputs, while just maintaining the level of national production, attain the planned increments in national income. The results obtained so far indicate that the planned reduction in the costs of materials will be achieved in the current year. This is borne out not only by overall results, but also by decreasing consumption of many basic raw and processed materials.

Let us recall preparation of the plan. Into the specifications was incorporated, e.g., an absolute reduction in deliveries of diesel oil to organizations under the jurisdiction of the SSR Government by more than 10 percent, i.e., 104,000 tons less than in 1981. The strict system of management, particularly issuing of funds allocation vouchers for the first and second quarters of the year, not only created the climate for saving, but also provided the incentive for adopting responsible measures. Thus, the yearly limit was met in the first two quarters by 43.6 percent. Deliveries continued without interruption and that, it seems, caused a gradual loss in perception of the objective inevitability of the absolute requirement for not exceeding the volume for the year. In the third quarter some sectors and regions were drawing on relatively higher amounts of fuels.

It is also necessary to keep in force the measures for economic consumption of /all petroleum products/ and not count on their higher consumption. The same applies to metals and other raw materials, but not at the expense of supplies. That would be a shortsighted policy which could soon boomerang. Of particular urgency at year's end is implementation of economy measures for /saving of all types of fuels and energy/. The coming winter season will verify the results of the efforts we have developed so far.

The reductions achieved in the costs of materials so far can be illustratively described as allowing industry to work for approximately 6 days with materials saved in comparison to their consumption last year. However, it must be openly stated that we are far from exhausting all possibilities. /As it is, the achieved savings are for the most part the result of centrally



programmed structural changes and only to a small extent are they the result of improved utilization of raw materials for products with higher technical, economic and qualitative specifications/. For example, in the first half of the year the volume of products of an advanced technical level not only did not increase in some sectors, but actually decreased, e.g., in the electro-technical, chemical, consumer goods and food industries. The same can be said of the value of products with first-degree quality rating in the chemical industry and others. However, of key importance is the fact that in industry as a whole the share of products of this level in the entire volume of production is inadequate. This opens up a wide range of opportunities for technicians in enterprises and research and development installations to engage in activities that will help repay their considerable debt to society.

We are less successful in reducing the /high demands on wages/. Many sectors achieved unfavorable results in this aspect. What is more, increased demands on wages are occurring, e.g., in construction operations, in production of construction materials, in the woodworking industry, in the state-controlled agricultural sector, etc. The main cause is failure to meet the planned volume of output and failure to achieve the envisioned increase in the productivity of labor. Excessive drawing on wage funds that is not commensurate to newly created value at any given workplace interferes with equilibrium on the domestic market.

Thus, it becomes inevitable to adopt at year's end supplementary measures following the provisions of Decree No 143/1980 of the Codex, also for the reason that any excess in drawing on wage funds in the current year will have to be compensated for in the next year. Much more remains to be done in the area of technical development and quality of products, particularly improved utilization of qualification levels and principles of differential remuneration of personnel in relation to the actually attained results. In cases where there is no 100 percent guarantee of achieving the planned qualitative results, measures must be taken to prevent premature payment of advances on bonuses.

From the results attained for three quarters of the year it follows that in spite of additional new factors that detrimentally affected meeting of this year's plan, we are on the whole succeeding in continuously and without upheavals implementing the goals of the CPCZ's economic and social policy without the losses and conflicts which we are witnessing in many economically advanced nonsocialist countries. However, the manner in which development is implemented convinces us at the same time that not all workplaces take advantage of the possibilities offered by our strong production, technological and economic potential, our planned management of the national economy, and that there still is an inadequate utilization of the appropriate economic tools. There are still unused reserves in the area of promoting active participation of personnel, be it at individual levels of management, or be it at workplaces of the industrial, construction and agricultural organizations and in the scientific research base.

Thus, the year's end should be characterized by an even more effective activation of all manpower and resources, so that not only can we create the prerequisites for successful completion of the second year of the 5-year plan, but also for entering its third year.

## BETTER MANAGEMENT OF UNFINISHED CONSTRUCTION URGED

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[Article by Engineer Miroslav Strejcek, State Planning Commission]

[Text] "Statisticka rocenka CSSR" (Czechoslovak Statistical Yearbook) for 1979 published data on the unfinished construction within the state sector and the housing construction cooperatives, and as of 1978 also on all construction projects within the economy, with the exception of the private sector. From the data on the budgeted costs of the construction projects in the individual years we see that the volume of construction projects in 1979 more than doubled in comparison with 1968 and reached 586 billion korunas, as compared with 270 billion in 1968 (at current prices), and this growth occurred parallel with an increase of net national income.

This would be very gratifying if the disposable investment resources spent had increased commensurately. Their expenditure, however, developed as follows (in billion korunas):

	<u>1968</u>	<u>1979</u>	<u>1979/1968</u>
Combined total budgeted cost	269.5	585.8	2.17
Volume of work and deliveries	51.9	96.0	1.85

This fact means that the volume of the started construction projects rose at an ever-lower concentration of the disposable investment resources, i.e., at a slower rate of construction, and hence at a rise in the volume of unfinished construction.

If we are to uncover the causes of this development, we must analyze the volume of unfinished construction from the viewpoint of its planning and management, so that in the end we may be able to propose the directions of its solution.

From this point of view, in capital construction there are three modes of managing unfinished construction:

--General mode of regulation in the case of construction projects with budgeted costs exceeding 2.0 million korunas, i.e., by specifying the volume of construction starts;

--Determination of the annual volume of capital construction in the case of investment projects with budgeted costs up to 2.0 million korunas; and

--Special modes of regulating unfinished construction.

In addition to the regulation of comprehensive housing construction, special modes of regulation were introduced gradually under the 5th and 6th Five-Year Plans on a limited scale, i.e., only for the construction of highways of classes I and II, expressways, mines, and for the construction of transmission lines by the own (nonconstruction) organizations of the Ministry of Communications. Subsequently the construction of the Prague metro and of the transit gas pipelines also was included here. In the course of preparing the system of management and planning for the 7th Five-Year Plan, the effectiveness of the individual systems for the management of unfinished construction was evaluated on the basis of the achieved results. Since not one of them showed unambiguously favorable results, the Set of Measures for Improving the Planned Management System abolished them. Only the system for the planning and management of comprehensive housing construction was retained. It is regulated in a decree of the State Planning Commission and the Federal Ministry of Technological and Investment Development, but its impact on unfinished construction in comprehensive housing construction is very small.

The most significant group of investment projects from the viewpoint of managing unfinished construction are the projects with budgeted costs exceeding 2.0 million korunas; they accounted for two-thirds of the 586 billion korunas budgeted in 1979. In terms of the number of projects, however, the projects with budget costs up to 2.0 million korunas rank first.

<u>Projects</u>	<u>Budgeted cost (billion korunas)</u>	<u>Number</u>	<u>Proportion of Budgeted</u>	
			<u>cost</u>	<u>Number</u>
Over 2 million korunas budgeted	387	7,364	66.2	14.9
Up to 2 million korunas budgeted	40	35,693	6.2	72.4
Comprehensive housing construction	159	6,227	27.0	12.7
Of which: Up to 2 million korunas	6	3,472	1.0	7.1

The basis for the management and evaluation of unfinished construction is a comparison of the volume of capital construction in place, with the resources available for capital construction. The volume of capital construction is expressed by the indicator of the average budgeted cost of the capital construction in place; and the resources available for capital construction, by the volume of work and deliveries. This ratio expresses the average construction time; and its inverse, the rate of progress of capital construction. From the viewpoint of planning practice, the indicator of total budgeted cost is to a certain extent incongruous with the nature of planning, which is directed primarily toward managing future activity, whereas the budgeted costs of unfinished construction include activities already completed and therefore they no longer can be influenced. Therefore the total budgeted cost has been replaced by the balance of budgeted costs that represents the amount of work still to be done. The ratio of the balance of budgeted costs to the volume of available investment resources indicates the average time required for the completion of the projects. In cases when the balance of budgeted costs equals one-half the total budgeted cost of the projects at the end (or beginning) of the year, the completion time multiplied by two gives the average construction time. The statistical results over a fairly long period of time confirm that the total balance of budgeted

costs approximates one-half the total budgeted cost, and that the deviations are negligible for the needs of conversion. An advantage of the indicator of average construction time is that it gives the ratio of two variables in the given year and its value is not affected by a change of the price level, especially in the case of statewide adjustments of the wholesale prices. This enables us to investigate its development in a long time series.

Let us examine how unfinished construction developed in the mentioned categories of investments.

#### Goal-Oriented Investment Projects With Budgeted Costs Over Two Million Korunas

This category of investment projects is the largest. It accounts for two-thirds of the total budgeted cost, and therefore its development from the viewpoint of the economy is the most important. The criterion of 2.0 million korunas of budgeted cost was adopted for the 6th Five-Year Plan; before 1976, it was 1.5 million korunas. In the individual years reported in the statistical yearbooks, i.e., from 1968 on, the ratio of available investment resources to the volume of work still to be done, designated hereinafter as coefficient  $k$ , developed as follows:

<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
2.26	2.37	2.65	2.46	2.40	2.26	2.29	2.39	2.24	2.32	2.50	2.50	2.64

In 1968-1970, this coefficient worsened sharply as a result of the weakening of central management during the crisis years. With the strengthening of the state plan's control function, in combination with the short-term freezing of new constructions starts, unfinished construction gradually declined in the first half of the 1970's and became stabilized by 1977, in spite of the addition of new programs as a result of the coordination of the CEMA countries' plans, and although the growing need to resolve the fuel and power balance likewise required new investment start. The significant worsening in 1978 is primarily a result of the 1977 wholesale price reform, when the higher price index for the balance of the budgeted costs, in comparison with the price index derived from the original budgeted cost, meant an increase of about 12 billion korunas in the volume of work and deliveries still to be performed on the investment projects. In the following years we were unable to damp this influence, but in 1980 unfinished construction again showed a rising trend, under the pressure of the new investment starts intended to solve the tasks of the prepared Seventh Five-Year Plan. At the same time we were unable to realize the planned investment resources on a scale that would have enabled us to satisfy these demands within the time required.

If we express coefficient  $k$  in terms of the average construction time, we see that it ranged from 4.5 years in 1968 to 5.3 years in 1970 and also in 1980. But at the same time, the average size of a construction project nearly doubled.

	<u>1970</u>	<u>1971</u>	<u>1975</u>	<u>1976</u>	<u>1980</u>
Average budgeted cost per project (million korunas)	30.5	35.9	45.8	54.6	57.3

Thus a certain increase of the average construction time is caused objectively also by the increase of the average project size. Thus the question necessarily arises: To what extent is the unfinished construction excessive? If we

start out from the accepted evaluation that the real average construction time of a project in the size category of 50 to 60 million korunas is about 3.5 years, then the order of excessiveness is 40 to 50 percent.

If we compare the mentioned development with the tasks set by the 15th and 16th CPCZ Congresses, we are obliged to establish that significant shortfalls occurred in this area. In the 5th and 6th Five-Year Plans, which ensured the congress resolutions regarding unfinished construction, its reduction as expressed by the coefficient k was specified as follow:

5th Five-Year Plan		6th Five-Year Plan	
1971	2.24	1976	2.11
1972	2.04	1977	1.91
1973	1.02	1978	1.86
1974	1.69	1979	1.86
1975	1.58	1980	1.83

Both five-year plans expected to achieve the optimal volume of unfinished construction by the end of the period. We will demonstrate why this did not happen on the development of the available investment resources on the one hand, and on the total budgeted cost of the capital construction in place—including savings cost increases, as compared with the reserves provided in the plan—on the other.

New construction starts under the five-year plans were maintained within the specified limits. Under the 5th Five-Year Plan the limit on new starts was exceeded by 7.4 billion korunas or 3 percent, but under the 6th Five-Year Plan new starts were lower by 3.0 billion korunas or 1 percent than the limit specified in the plan.

The increase of the budgeted costs of the projects had a much greater effect. The Federal Statistical Office reported that for the economy as a whole the budgeted costs increased by 31.5 billion korunas on 4,348 projects in the period 1971-1975, and by 20.1 billion korunas on 1507 projects in 1976-1980. If we deduct the increase of the budgeted costs in comprehensive housing construction and on the capital construction projects subject to special modes of regulation, then the increase in the category of projects with budgeted costs exceeding 2.0 million korunas can be quantified as 26.5 billion korunas under the 5th Five-Year Plan, and 17.2 billion under the 6th Five-Year Plan. To compensate for new construction starts above the limit and for the higher budgeted costs, the 5th Five-Year Plan provided a reserve of 15.9 billion korunas; and the 6th Five-Year Plan, 29.8 billion korunas. In the course of the projects' realization there were also savings in the budgeted costs, especially in the form of unused reserves.

If we add all these effects on the volume of work and deliveries still to be performed at the end of the five-year periods—i.e., on the balance of the budgeted costs—then we find that under the 5th Five-Year Plan this balance increased by 10.9 billion korunas, but under the 6th Five-Year Plan it dropped by 20.7 billion korunas, thanks to unspent reserves, fewer new starts, savings of the budgeted costs and their slower rise.

As evident from the realization of the planned investment resources, there have been significant departures from the tasks of the five-year plans. Under the 5th Five-Year Plan this was caused primarily by shortfalls in deliveries of machinery and equipment; and under the 6th Five-Year Plan, by shortfalls in the realization of construction work. This is shown in the following summary:

	(1) stavební práce			(2) stroje a zařízení		
	plán	skut. (3)	plnění (4)	plán	skut. (3)	plnění (4)
(5) ceny roku 1974						
1970		26,9	.		12,4	.
1971	27,1	25,8	-1,3	15,6	13,2	-2,4
1972	30,0	27,7	-2,3	14,6	12,2	-4,4
1973	31,6	30,2	-1,4	17,5	14,3	-3,4
1974	33,2	32,9	-0,3	20,5	16,2	-4,5
1975	34,9	35,6	+0,7	21,9	16,5	-5,4
(6) 5. 5LP	156,6	152,2	-4,6	92,3	72,4	-19,9
Ø 70/75 (%)	105,3	105,8	-	112,0	105,9	-
(7) ceny roku 1977						
1975		32,8	.		13,2	.
1976	33,9	31,8	-2,1	15,6	15,4	-0,2
1977	36,1	31,7	-4,4	19,5	16,8	-2,7
1978	37,9	32,7	-5,2	20,0	18,0	-1,0
1979	40,1	31,9	-8,2	20,8	18,5	-2,3
1980	42,4	32,1	-10,3	21,2	19,5	-1,7
(8) 6. 5LP	190,4	174,5	-30,1	97,1	88,1	-9,0
Ø 75/80 (%)	105,3	99,6	-	109,9	108,1	-

Key:

- |                            |                       |
|----------------------------|-----------------------|
| 1. Construction work       | 5. 1974 prices        |
| 2. Machinery and equipment | 6. 5th Five-Year Plan |
| 3. Report                  | 7. 1977 prices        |
| 4. Fulfillment             | 8. 6th Five-Year Plan |

The considerable shortfall in deliveries of construction work under the 6th Five-Year Plan could warrant also the question as to whether the planned increases in available resources were realistic. As evident from the table, the planned average annual growth rate in the 6th Five-Year Plan (5.3 percent) was lower than the reported average annual growth rate for the 5th Five-Year Plan (5.8 percent). The annual volume of construction work under the 6th Five-Year Plan stagnated, fluctuating around 32 billion korunas a year. This resulted also in the high degree of the unpreparedness of construction, a cause of the shortfall in deliveries of machinery and equipment. This unfavorable situation in deliveries of construction work merits closer analysis. Some of its causes have been explained in HOSPODARSKE NOVINY by Karel Polak, the CSR minister of construction (HOSPODARSKE NOVINY, No 46, 1981), by his deputy, Pavel Mechura (HOSPODARSKE NOVINY, No 8, 1982), and by Julius Kinka, SSR deputy minister of construction (HOSPODARSKE NOVINY, No 5, 1982).

This development of the realization of available resources meant that investment resources accounted for 24.5 billion korunas under the 5th Five-Year Plan, and for 39.1 billion under the 6th Five-Year Plan, in the nonfulfillment of the

planned reduction of the balance of budgeted costs, in the final year of the five-year periods. The influence of the individual factors is presented in the following summary (in billion korunas):

	<u>1975</u>	<u>1980</u>
Balance of budgeted costs, according to 5-year plan	87.7	121.3
Report	123.1	139.5
Overrun of balance of budgeted costs	+35.4	+18.2
Of which: Effect of total budgeted cost	+10.9	-20.9
Incl.: Drawing of reserves	+10.6	-12.6
Changes in new starts	+ 7.4	- 3.0
Savings in budgeted costs	- 7.1	- 5.3
Effect of fulfillment of resources	+24.5	+39.1
Incl.: Construction work in place	+ 4.5	+30.1
Machinery and equipment	+19.9	+ 9.0

To this substantial shortfall in the realization of available resources the planning organs were forced to respond in the annual plans, primarily by planning only such an increase in the volume of work and deliveries that corresponded to the lower base of the preceding years, which in the case of construction work was due primarily to shortfalls in labor productivity. Significant are the modifications in the annual plans, for deliveries of machinery under the 5th Five-Year Plan, and for construction work under the 6th Five-Year Plan (billion korunas):

	Construction work			Machinery, equipment		
	<u>5-year plan</u>	<u>Annual plans, total</u>	<u>Difference</u>	<u>5-year plan</u>	<u>Annual plans, total</u>	<u>Difference</u>
5th Five-Year Plan (1967 prices)	156.8	158.5	+ 0.7	92.3	81.8	-10.7
6th Five-Year Plan (1977 prices)	190.8	174.5	-15.9	97.1	91.0	- 6.1

In spite of these modifications, the annual plans clearly were not fulfilled:

	Construction work		Machinery, equipment	
	<u>Billion Kcs</u>	<u>Percent</u>	<u>Billion Kcs</u>	<u>Percent</u>
5th Five-Year Plan (1967 prices)	- 6.3	96.0	- 9.2	88.7
6th Five-Year Plan (1977 prices)	-14.2	91.8	- 2.9	96.8

The seriousness of this development stems from the fact that the volumes of construction work and deliveries are determined on the basis of direct negotiations between suppliers and customers at the enterprise level, and are then confirmed in protocols between the central agencies of the suppliers and customers, respectively. Thus these are requested volumes of work and deliveries, specified in their entire structure on the basis of the planning and design documentation, and of the construction organizations' knowledge of what capacities they will have available; this should guarantee that the planned deliveries are realistic. The

results of fulfillment show how reckless, irresponsible, and sometimes even speculative were the confirmations of obligations, and how ignorant the suppliers were of their available capacities. And since the nonfulfillment of work and deliveries on projects with budgeted costs over 2.0 million korunas is accompanied by an overfulfillment of the repair tasks on projects up to 2.0 million korunas, this also indicates shortcomings in management. The investors of course are not entirely free of fault either. They do not always make the planning and design documentation, the construction sites, etc. available to the construction organizations on time.

Nonfulfillment of even the thoroughly verified planned available resources has serious consequences for reducing the volume of unfinished construction. The annual state plan specifies new investment starts only on a scale that permits, on the basis of the verified available resources, their greater concentration on the investment projects in progress, and thereby also an acceleration of the average construction time and a reduction of the volume of unfinished construction, as compared with the results of the previous year (in the plan, with the expected fulfillment). This can be demonstrated on the development of the planned and the reported values of coefficient k in the individual years:

(1) 5. 5LP				(2) 6. 5LP			
rok (3)	skuteč- nost (4)	rok	plán	rok	skuteč- nost	rok	plán
1970		1971	2,24	1975	2,34	1976	2,10
1971	2,46	1972	2,19	1976	2,24	1977	2,12
1972	2,40	1973	2,03	1977	2,32	1978	2,28
1973	2,26	1974	2,14	1978	2,50	1979	2,21
1974	2,29	1975	2,23	1979	2,50	1980	2,39
1975	2,34			1980	2,64		

Key:

- |                       |           |
|-----------------------|-----------|
| 1. 5th Five-Year Plan | 3. Year   |
| 2. 6th Five-Year Plan | 4. Report |

The determining factor in this computation is the planned volume of available resources that is confirmed in the relations between suppliers and customers, and from it the volume of new starts is derived and set. If during the year the necessary resources are not formed in production, any operational intervention (for example, a freeze on new starts) is practically and economically ineffective. Nonfulfillment, especially in the case of deliveries of machinery, can be quantified with sufficient accuracy only toward the end of the year, i.e., at a time when construction work on the new starts is already underway in accordance with the plan, and within engineering the deliveries are already in process. Therefore the announcement of a freeze would affect only an insignificant number of new starts. At the same time this is "blind justice" that does not take into consideration the national economic consequences of stopping work on this or that project. The sensible procedure is the one that in drafting the plan for next year starts out from the anticipated fulfillment of the plan in the current year, whereby the consequences of nonfulfillment are interpreted and solved in a planned manner (especially by limiting new starts the next year).



The plan must react also to increases of the budgeted costs, because their effect on unfinished construction is the same as that of new starts. How the higher budgeted costs affected the volume of new starts is evident from the following data:

Total Budgeted Cost of New Starts (Billion Korunas)

	<u>5th Five-Year Plan</u>	<u>6th Five-Year Plan</u>
Five-year plan	225.2	274.9
Annual plan	206.5	271.5
Report	232.6	271.9

Under the 5th Five-Year Plan the annual plans reduced new starts by 18.7 billion korunas in comparison with the five-year plan. During the individual annual plans, of course, additional starts were included that stemmed primarily from agreements on integration programs within CEMA, after the five-year plan had already started. These new starts involved structural programs such as development of the petrochemical industry, the motor vehicle, nuclear, pipeline and other programs. The mentioned curtailment of new starts covered also the increase of the budgeted costs above the 15.9 million koruna reserve.

Under the 6th Five-Year Plan the annual plans called for new starts lower by about 3.0 billion korunas, and this was fulfilled. This of course was not enough to compensate for the 39.1 billion korunas of shortfall in resources. The 12.6 billion korunas of unspent reserves, and savings of 5.1 billion korunas were used for this purpose. These amounts, together with the reduction of new starts by 3.0 billion korunas, compensated for only 54 percent of the shortfall in resources.

Concluding this chapter, we can establish that besides the favorable factors contributing to the consolidation of capital construction--such as the interception of rising budgeted costs and their offsetting with the planned reserves, and the maintenance of new starts at the planned level--there were also constant and significant unfavorable factors: the lack of sufficient reality in the planning and realization of available resources and of construction work in particular, and the irresponsible conduct of supplier and customer relations.

Comprehensive Housing Construction Projects With Budgeted Costs Exceeding Two Million Korunas

The second group according to the magnitude of the capital construction undertaken in the planned year comprises the comprehensive housing construction projects of the national committees. Their share of the total volume of capital construction in place is about one-fourth. Statistical surveys enable us to evaluate comprehensive housing construction in two size categories, similarly as the goal-oriented investment projects: with budgeted costs up to and over 2.0 million korunas, respectively. Thereby we obtain indicators that are more accurately predictive.

The development of unfinished construction on comprehensive housing construction projects with budgeted costs over 2.0 million korunas (over 1.5 million until 1976) is characterized by the growing size of the average project in relation to the growth of coefficient k:

	<u>1970</u>	<u>1975</u>	<u>1976</u>	<u>1980</u>	<u>1975/ 1980</u>	<u>1976/ 1970</u>	<u>1980/ 1976</u>
Average budgeted cost per project (10 <sup>6</sup> Kcs)	24.1	43.1	51.2	55.5	179	212	108
Coefficient k	2.35	3.01	3.03	3.43	128	129	113

The presented data show a moderately improving trend until 1976, because the construction time (coefficient k) became longer by not quite 20 percent while the average construction project roughly doubled in size. In 1976, however, there is a change to a worsening volume of unfinished construction.

The general principle of managing unfinished construction by limiting new starts does not apply to comprehensive housing construction. The state plan does not set the balance of budgeted costs, nor is the volume of work and deliveries an obligatory task in comprehensive housing construction (except for Prague, the North Bohemia Kraj National Committee, and Bratislava). To a certain extent this function has been taken over by the project management and control procedures of comprehensive housing construction, but they remain merely its basis. Unfinished construction is not controlled purposefully by the plan, because no indicators are set for it. This makes it impossible to analyze the development as compared with the plan, as in the case of the goal-oriented investment projects with budgeted costs over 2.0 million korunas. We can only judge how the fulfillment of the planned volumes of work and deliveries affected the mentioned development:

	5th Five-Year Plan (Billion korunas)	6th Five-Year Plan
Five-year plan	84.5	97.6
Annual plans	87.7	96.2
Report	85.6	90.6
Fulfillment of five-year plan	+1.1	-7.0
Fulfillment of annual plans	-2.1	-5.6

Overfulfillment of the planned volume of work and deliveries under the 5th Five-Year Plan by 1.3 percent is matched by the favorable development of unfinished construction until 1976, while its increase under the 6th Five-Year Plan unquestionably was influenced by the 7.2-percent shortfall in the fulfillment of this five-year plan, and the 6.2-percent shortfall in the fulfillment of the annual plans that had been reduced in comparison with the five-year plan because of nonfulfillment.

But what is the unfinished construction in comprehensive housing construction in absolute terms? Let us compare the average construction time of goal-oriented investment projects with that of comprehensive housing construction projects, with due consideration for their average size:

	<u>1976</u>	<u>1980</u>
Average budgeted cost [million korunas]		
Goal-oriented investment projects	51.4	55.0
Comprehensive housing construction	51.2	55.5
Average construction time, years		
Goal-oriented investment projects	4.5	5.2
Comprehensive housing construction	6.0	6.8
Ratio of comprehensive housing construction's construction time to that of goal-oriented investment projects	133	130

From a comparison of these data we see that for projects of approximately the same size the average construction time in comprehensive housing construction is longer by more than 30 percent. But comprehensive housing construction consists predominantly of standard large-panel construction that in itself should be faster than the construction of the basically nonstandard buildings in industry, transport and in the nonproductive sphere. If we have agreed that the optimal average construction time of goal-oriented investment projects is about 3.6 years, then--taking into consideration the possibilities of faster construction in comprehensive housing construction--we may conclude that the average construction time, and hence also the volume of unfinished construction, are more than double their optimal values. This conclusion agrees also with an evaluation from the viewpoint of the principle that the project management and control procedures for comprehensive housing construction must be applied to the construction of residential districts whose optimal construction time is maximally 3 years. That the volume of unfinished construction is twice what it should be is clearly evident from a comparison with Decree No 16/1981 of the Federal Ministry of Technological and Investment Development that permits a maximum construction time of 35 months, or not quite three years, for a residential complex in the size category of 50 to 65 million korunas.

#### Goal-Oriented Investment and Comprehensive Housing Construction Projects With Budgeted Costs Up to 2.0 Million Korunas

Here we have two separate groups of investments, with different systems of management. While the comprehensive housing construction projects fall under the project management and control procedures of comprehensive housing construction, the goal-oriented investment projects belong in the category of investments with budgeted costs up to 2.0 million korunas (1.6 million until 1976), and of machinery not included in the project budget. These structures, and the machinery purchased for plants under construction are interchangeable, in accordance with the investor's option. But since we are interested also in the effectiveness of the system of management and in ways of improving it, let us examine the volume of unfinished construction and its development in both categories of investment projects.

The group of goal-oriented investment projects with budgeted costs up to 2.0 million korunas is different in that a significant proportion of these projects are completed during the year, thus their total budgeted cost is equal to the annual available volume of work and deliveries, and the possibility that these two quantities might differ does not arise. For the management of such projects, therefore, it is sufficient to merely set the volume for this category of investments, either absolutely (as a limit) or by means of a financial normative (the Development fund). Investment projects with a construction time of 12 months, which corresponds generally to a project with a budgeted cost of about 2.0 million korunas, also have been included in this category, because of the ease of carrying them over from one year into the next. In view of these differences, the average construction time cannot be calculated from the balance of the budgeted costs but must be derived from the average status of the budgeted costs during the year. The following summary shows the development of the average construction time, and of the size of the average project [table on next page].

The increase of the average project's size from 0.57 to 0.71 million korunas under the 5th Five Year Plan, and from 0.82 to 1.16 million korunas under the

	<u>1970</u>	<u>1971</u>	<u>1975</u>	<u>1976</u>	<u>1980</u>
Number of projects on 31 Dec	12,420	10,157	12,598	12,742	18,154
Number of projects built	34,350	28,859	30,339	29,467	36,659
Average project size (million korunas)	0.57	0.63	0.71	0.82	1.16
Average construction time [years]	1.04	0.93	1.09	1.22	1.52

6th Five-Year Plan, shows that the investors' needs within this size category shifted to larger projects. The average construction time lengthened commensurately with the increase of the average project's size, although the trend under the 5th Five-Year Plan shows a moderate increase in unfinished construction (5 percent), but a certain decline (15 percent) under the 6th Five-Year Plan.

	<u>1975/1971</u> (percent)	<u>1980/1976</u> (percent)
Average budgeted cost	112	140
Average construction time	117	125

From the viewpoint of the absolute volume of unfinished construction, we may estimate that it is about double. The issued limits on the construction time allow 12 to 14 months for projects with 2.0 million korunas of budgeted cost, and exceptionally 18 months. But this construction time is reported for projects whose average size is 1.16 million korunas, the corresponding optimal construction time for which would be about 9 months.

The housing construction projects with budgeted costs of up to 2.0 million korunas (1.5 million before 1976)--this is essentially scattered housing construction--report a basically stable volume of unfinished construction, which would be favorable if it were not more than double what it should be.

	<u>1970</u>	<u>1971</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1980</u>
Average budgeted cost per project (million korunas)	0.90	0.72	0.74	0.79	0.82	0.95
Average construction time (yrs)	1.82	2.00	1.73	1.76	1.96	2.09

Statistical monitoring shows that the construction time of buildings whose average size is 0.8 to 0.9 million korunas of budgeted costs ranges from 20 to 24 months. In 1980, the average construction time of buildings whose average size was just below 1.0 million korunas of budgeted costs was 25 months. At the same time Decree No 16/1981 of the Federal Ministry of Technological and Investment Development allows a maximum construction time of 14 months for housing construction projects in the size category of 2.0 million korunas of budgeted costs. In comparison with goal-oriented investment construction, in 1980 the situation in housing construction within this size category was substantially worse, because the average size per project was 18 percent smaller, but the average construction time was 38 percent longer.

#### Ways to Solve Excessive Unfinished Construction

Attainment of the optimal volume of unfinished construction is not only of key importance for the rational and economical course of the reproduction process in capital construction, but it is also an essential condition for attaining

high social economic efficiency. Therefore the central managing and planning organs must devote maximum attention to this problem. Only if capital construction takes place within optimum time limits and planned completion dates will economic effectiveness be achieved, in the form of ensuring national income gains in the case of projects in the productive sphere, and the satisfaction of the population's needs in the nonproductive sphere. Otherwise we will not only fail to realize the planned returns on investment, but an excessive amount of society's resources will be frozen. Therefore a basic and necessary condition for the efficient and smooth course of the reproduction process in the area of capital construction is the attainment of the planned proportion between the volume of capital construction and the available resources. In this relationship of two variables the resources are determined by the national economic proportions, i.e., by the rate of investment (rate of accumulation), and the structure of resources. Therefore the volume of capital construction in progress at any given time must be managed, and the most sensible way of achieving this is to manage the scale of investment starts. A variant based on halting capital construction is likewise feasible, but from the viewpoint of national economic effectiveness it freezes the expended resources and is warranted only in exceptional economic situations.

The system of management employed in the case of goal-oriented investment projects with budgeted costs over 2.0 million korunas best meets these requirements, because it has fully developed analytical, conceptual and organizing functions. Therefore it also yields better results than the other two systems of management.

One might justifiably ask why better results have not been achieved in solving excessive unfinished construction. The answer to this question can be found in the results for 1981 when, after an evaluation of past development, it was found that a more radical concept of limiting new starts was necessary in response to the great shortfall in planned available resources. A confirmation of the organizational effectiveness of this system is the report on plan fulfillment in 1981 when a radical improvement occurred in unfinished construction in accordance with the plan, under the same conditions as in the preceding years when the planned resources were not fulfilled.

	1980 report	1981 plan	1981* report	1982 plan
	(billion korunas)			
Balance of budgeted costs on 31 Dec	176.9	153.7	150.8	135.6
Volume of construction work (annual)	41.8	42.9	40.6	37.9
Volume of machinery deliveries (annual)	20.3	19.7	19.7	21.0
Budgeted cost of new starts	63.4	39.2	37.6	35.1
Number of projects on 31 Dec	7187		6013	
Coefficient k	2.85	2.46	2.49	2.31

\*Preliminary results of the Federal Statistical Office

Even though the results that the Federal Statistical Office reports for 1981 are not the final ones, it is already evident that a change of the order of magnitude set by the plan--it calls for reducing new starts by 38 percent or 24.2 billion korunas in comparison with the report for 1980--will be achieved, and that by the end of 1981 the volume of work and deliveries still to be done (the

balance of budgeted costs) will drop by about 13 percent. Likewise the number of unfinished projects at the end of 1981 will be lower by nearly 1200 as compared with 1980, and the volume of completed projects will be higher by 14 billion korunas or 37 percent. This result has been achieved in a situation where, similarly as in the preceding years, there was a shortfall in the planned volume of construction work (by about 2.3 billion korunas or 5.4 percent).

This basic solution will continue also according to the plan for 1982. The situation will be more difficult, because a lower volume of available construction work can be expected. In spite of this, the volume of work and deliveries still to be performed should drop by about 10 percent, and the concentration of work and deliveries should increase by about 7 percent.

The basic concept of solving excessive unfinished construction is set by the appropriate indicators as a task of the state capital construction plan; there is a limit on new starts that may not be exceeded, and the volume of work and deliveries is a task that the state plan sets for investors. The concentration of resources on projects with budgeted costs over 2.0 million korunas will continue to be ensured through the construction-industry and engineering suppliers, for whom the volume of work and deliveries in this group of projects is set as an obligatory task of the state plan. For contractors belonging under the Czech and Slovak ministries of construction, moreover, the maximum volume of new starts is being set in proportion to the formation of available resources, i.e., to the normative for unfinished construction. The system of management would of course be incomplete without the set of economic incentives that support the objectives of the state plan: the incentives to observe the time limits for capital construction, to place imported machinery in operation on schedule, and against cost overruns. In the course of the further elaboration of the Set of Measures, also the question of incentives will be refined, especially in conjunction with amending the decree on invoicing.

Suitable measures must be adopted to solve excessive unfinished construction in the case of projects with budgeted costs up to 2.0 million korunas, because in principle the investors themselves decide the content of the projects in this category of investments. At economic organizations, therefore, economic stimulation must be considered first of all. According to the Set of Measures, economic stimulation is provided by the financing of such investments from the economic organizations' internal resources, i.e., from the development fund that is formed with the help of a financial normative, in accordance with the economic results. Evaluation of this value mechanism is still underway, and for the time being it is difficult to assess its impact on accelerating the construction of small projects. A new measure in this area is the setting of time limits for the completion of projects in the size category of up to 2.0 million korunas of budgeted costs. If the time limit specified in the contract by mutual agreement exceeds the maximum permissible time limit, the project in this category may not be started. In addition to the economic and procedural measures, it is also possible to declare a, say, six-month freeze on new starts if the volume of unfinished construction gets very bad. This would permit a drastic reduction of the number of projects under construction at the same time, in view of the relatively short cycle of the projects, and the freed construction capacities could be concentrated on the remaining projects.

A new system for managing comprehensive housing construction must be instituted, for the projects with budgeted costs over 2.0 million korunas and also for the

ones with budgeted costs up to this amount. A new system is absolutely essential in view of the constantly worsening situation in this area. With the introduction of the project management and control procedures, control of unfinished construction has been transferred from the state plan to the national committees and the national ministries of construction, but they have been unable to master the situation. The present shortcomings, especially the lags in providing public utilities and services for the population, indicate that it will be necessary to elaborate the management and control procedures for comprehensive housing construction, tailored to the project as the basic unit. From this point of view it will also be necessary to introduce the negotiation of supplier-customer relations and contracting. Realization of this concept will permit, even on the basis of the management and control procedures for comprehensive housing construction, an expansion of the indicators of the state plan to the extent necessary for the management of unfinished construction--i.e., the inclusion of the indicator of the budgeted costs of new starts in comprehensive housing construction, of the balance of the budgeted costs (while setting the available resources as the state plan's obligatory task for the investor and the supplier), and of the calculated average construction time. When changing over to this system in comprehensive housing construction, it will also be possible to introduce the methods of stimulation that have proven suitable on goal-oriented investment projects with budgeted costs over 2.0 million korunas. However, these problems are very complex and will have to be analyzed in greater detail.

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## POTATO GROWING PROBLEMS DESCRIBED

Bratislava SLOBODA in Slovak 11 Nov 82 p 3

/Article by Elena Strenatkova: "A Full Sack of Potato Problems"/Excerpt/ World Production

The year 1980 was one of the worst for potato growers. It is true that world production of this second type of bread exceeded 211.5 million tons, but what is this compared to 1979 when a record for the past decade was set of 258.6 million tons. Lower production is the result both of less sown area and of poor harvests. The current year has also not been an auspicious one for farmers. In the United States, 14 percent less was harvested, in Peru 29 percent, in Brazil 11 percent and in the Federal Republic of Germany 23 percent. The greatest Asian producer is India. It is interesting that in 1980 production increased there by 17 percent over the previous year, reaching 10.5 million tons.

The CEMA countries account for 15-18 percent of world potato imports and for 18-21 percent of world exports. However, potato consumption in these countries is higher than elsewhere in Europe and the world. They account for 53 percent of world growing area and for as much as 55 percent of world potato production. For instance, 36 percent of this output is accounted for by the USSR, 12 percent by the PLR /Polish People's Republic/... Semilate and late varieties predominate, as indicated by their 95 percent share of total production. In the CSSR, GDR, USSR and PLR, the average per capita yearly consumption is approximately 170 kilograms. This means that more than 70 percent of production is used to feed the population, including that which goes to feed livestock. From 2 to 5 percent of potatoes are processed industrially.

## Situation in the SSR

It is certainly a matter of interest to us all what is produced in our country, in our soil, but we are particularly interested in what makes its way to our tables. In some years, when the potato supply has dropped off to become quite critical, many have asked themselves the question if it is at all possible that there be a shortage of them? To be sure, sometimes there is enough of this second bread. At one point in Kysucie and in Orava, potatoes and cabbage were the basic foods. And so many have not realized why today, at a time of agricultural mass production, there are fewer of them. Let us pull back the curtain. But to explain all the reasons for this we must go back about a quarter of a century.



The past 30 years of Slovak potato raising has brought many changes. The area sown has decreased by almost one-third, thereby reducing production as well. For instance, in 1935 potatoes were grown on an area of 216,000 hectares with a total production of 2,275,000 tons. Gradually, however, the fields devoted to cultivating this second bread declined. By 1965, potatoes were being sown on only 142,000 hectares, and just 2 years ago on a space half as large. In the socialist sector in the seventies, probably the smallest area devoted to potatoes was 28,600 hectares, which had grown by 1980 to more like 42,000 hectares. However, the planned area allotted to small growers was decreased by about 50,000 hectares for the 1978-1980 period. This meant that the socialist sector actually remained the sole supplier of consumer inventories. While as recently as 1970, 8,000 tons had been purchased from individual farmers, 10 years later this had declined to only 6 tons. The center of production had passed to the socialist sector.

A reduction of one-third in potato output is not only a reflection of the socialization of villages and of changes in human nutrition, but also of the fact that potatoes have ceased to be raised as livestock feed. This is a worldwide trend. However, despite such a great decline in the area sown, it has been possible to assure an ample supply for consumers with the exception of the years 1965, 1970 and 1980 when there was a very great decline in production. These situations were resolved by transfers from the CSR, but also by imports from the USSR, PLR and France.

Perhaps the most critical year in potato farming was 1980. This was an extreme year throughout Europe, but the blame fell mostly on the backs of farmers. Many people who do not obtain anything at the store are prone to criticize without thinking, accusing farmers of incompetence, the inability to produce. Two years ago, however, the biggest culprit was the weather. Bear in mind that in May, according to the agrotechnical schedule, potatoes were sown on 26,000 hectares (62 percent of total growing area), and on a further 10,000 hectares in the second half of this month. In April, for instance, there were 16 dry days in Presov and in Poprad, and 17 in Zilina. Then the temperature in May was lower than normal by almost 3 degrees Celsius, resulting in trouble from more surface frosts than usual, particularly in foothill regions.

#### Probe of Potato Raising

Potato raising was still suffering from "childhood diseases" when it was struck by yet another serious illness, namely an outflow. Yes, an outflow of workers from agriculture into other sectors, without any replacement at all. They were not replaced by equipment, conveyor belts, chemical preparations against weeds, pests and diseases, or by appropriate warehousing facilities.

Between 1948 and 1961, more than 590,000 workers left agriculture, and by 1980 a further 133,000 had left. This exodus had its greatest affect on the potato industry. No other possibility existed than to seek help through brigades even though this raised not only production costs, but losses as well.

But let us give the floor to the one most qualified, Eng Stefan Kuzmiak, employee of the plant production division of the SSR Ministry of Agriculture and Food: "Whoever in the grain raising industry has succeeded in implementing comprehensive mechanization, including harvesting lines, modern agricultural equipment and world class biological material has stepped on the potato raising industry on his way to the top. Despite the general application of mass-production conditions, in potato raising small-scale production forms have remained, along with incomplete lines and warehousing space. The material and technical base began to be built latest of all, in the Sixth 5-Year Plan."

And even where investment constraints were exceeded, the objectives established by the 15th CPCZ Congress are not being fully met. This is not surprising when one considers that only 20 percent of the needs for handling equipment was covered, and less than half the needs for potato planters. Problems, however, were concentrated around the harvest. This was the case despite the importing of two-row and three-row combines from the GDR, which remained unused in the warehouses of Agrotechnika. This came about because they were not suitable for the heavy soils in which potatoes are grown. It is equipment for light, sandy soils in level areas, and is capable of handling only 12 percent gradients. In 1979, these machines harvested about one-third of the total planted area, while in the CSR, where soil conditions are considerably better, they were able to harvest almost three-quarters of the area. Similar levels have been obtained in subsequent years.

Warehousing, however, is the special Achilles heel of potato raising. Indeed, 32 percent of all potatoes are stored in cellars (7 percent in the CSR), and 17 percent in piles (32 percent in the CSR), with the remainder being left in potato storage areas. Growers suffer from a shortage of harvesting lines, sorters, packaging equipment, while stores lack, above all, warehousing capacity and handling equipment for winter storage. Then, when there is rainy and cool weather in autumn all of these negative items are reflected even more in the quality of the potatoes. Bear in mind that retail trade claims about one-third of the harvest and could absorb at least half. By the end of this 5-year plan, construction of warehousing capacity for 68,000 tons is projected, which should be the average capacity needed by that time. But in the event that this construction does not materialize, in 1985 there will remain only the existing capacity, less those facilities which are no longer usable, meaning that only 20 percent of the harvest will find its way under cover. This will mean that not even the processing industry will have enough warehouse space to allow for the enrichment of potatoes designated for consumption, whether they are to be processed into french fries, mashed potatoes or crackers. Currently, the industry processes only 6,000 tons, while the demand is at least twice as great.

#### What Does Research Indicate?

Party and state organs have on more than one occasion adopted an unfavorable attitude to potato production. As emphasized by the 16th Congress, all levels of management at processing and research organizations must work to assure

measures to increase potato production at agricultural enterprises. Seeing that the potato industry gets on the right track is also the objective of the employees of the Potato Processing and Research Station at Velke Lomnice. The director, Eng Michal Smalik, Candidate for Doctor of Science, has already spoken on this point: "We have formulated a comprehensive program and production system for potatoes, based on use groups and economic groups of the SSR. This system has been formulated in four areas; for early consumption, other consumption, industrial and planting potatoes."

These systems, which are already being used by farmers, served last year as a kind of guideline for the work of 42 selected agricultural enterprises, precisely determining even the locations where certain types of potatoes are to be grown. These systems are comprised of the latest research and development findings, the most progressive types of agricultural equipment and the latest forms of work organization. In the selected enterprises, priority is to be given to securing the material and technical base, because only in this way may the desired impact be achieved.

"To be sure, it was impractical to be raising early potatoes even in Poprad," comments Eng Smalik, "but the approach of the consumer has changed as well. Large inventories are not being produced now, since in the cities particularly the conditions for them do not exist. At the same time, this implies the need to transport potatoes to stores periodically. However, there is still some fluctuation in this. But the consumer wants potatoes and is not interested in problems. And when potatoes are not available in stores, he blames the growers. He is not aware that the fault may lie with the enterprise in charge of agricultural procurement and supply or the food industry, which are responsible for this. And it is possible that he is not even aware of the problems of potato raising. Not a single plant production sector in the past 15 years has been so impoverished as this one. Potato raising has, as they say, brought up the rear. The merger of agricultural enterprises has concentrated the growing areas, but has not succeeded in providing the material and technical base. This has led, for practical purposes, to a concentration of the problems as well."

The cooperative workers in Smizany are exemplary producers of the second bread. Consequently, researchers apply their results to them. So it comes as no surprise when, for instance, during the Sixth 5-Year Plan they raised an average of 25.4 tons of potatoes per hectare on their 200 hectares, while the Czechoslovak average was a mere 13 tons per hectare. Even in a bad year, these farmers achieve yields in excess of 20 tons per hectare.

"This means that the achievement of large potato harvests, and thereby of self-sufficiency in their production, is truly a feasible task," adds director Eng Smalik.

Of course, researchers must also roll up their sleeves. They are faced with four important tasks: creating new varieties from existing ones, providing the necessary agricultural equipment, techniques and technologies, and assuring that under any conditions maximum yields in conjunction with high quality will be achieved.

### Where Are There Still Bottlenecks?

The plan stipulated the production this year of 1.1 million tons of potatoes. In mid-September of this year, when all had not yet been brought in from the fields, the SSR Ministry of Agriculture and Food stated that the farmers were approaching their goal when they had already delivered 1,047,000 tons. It is truly a great plus that the attitude of growers to this crop has completely changed. But then again this year was a good one for the harvest.

The farmers tried to work to the best of their ability so that early potatoes would be truly early. Farmers in Western Slovakia, in particular, which is the center of their growing region, ran into great problems of their own making. In July, when all early potatoes were supposed to be out of the ground so that the land could be sown again for the summer months in order to enrich the fodder base, these farmers had their hands tied because the Zelenina stores had enough to bury consumers up to their eyes. Since they did not have anywhere to store the potatoes, their answer to the farmers was to leave them in the ground, where they are warehoused best of all, thereby frustrating the efforts of the farmers. This in itself was not serious except for the fact that stores in the northern districts were less than full to bursting, quite the contrary. And here we are at the root of the problem, which is inflexibility, the inability to react readily to a good harvest. Indeed, the responsibilities of the employees of Zelenina is that there be enough potatoes in every corner of Slovakia. Yet this year, when there was a record harvest, there was again a lack of them in the north. A bottleneck had again occurred in the relationship between the grower and the consumer.

Those who have the capacity to store potatoes have already laid in good supplies for the winter. For instance, in Velky Krtis they are satisfied because the potatoes are handsome, large and of high quality. They will keep for a long time and there will not be much waste. However, one cannot say that this is the case with the capital city of the SSR, where potatoes, whether packaged or weighed, are of poor quality. Rotten, with others still green, many have a lot of so-called eyes, with the result that there is a great amount of waste, and winter has not even started yet. And it is precisely these kinds of shortcomings that represent something of an unfinished project for the enrichers, the seed companies. The objective is to improve consumer quality, warehousing, resistance to storage-related diseases, fungus and rot. Related to this, certainly, is also the matter of protection. We still lag behind the developed countries in the sense that we do not have enough of the proper pesticides so as to be able to produce and to store in a way that preserves quality. Much higher per hectare yields are achieved in France, the Netherlands, Belgium and Austria, and even in the CSR, where potatoes are raised on better soils (deeper, well supplied with nutrients and organic materials), and where the varietal mix is better. In these areas an optimal amount of pesticides is used, comprehensive harvesting equipment is in use, and modern equipment is used for consumer processing and the storage of potatoes.

To the extent that the material and technical base for the growers of this second bread is not built up, this knot of problems will get larger and more complicated, a situation that will be reflected in consumer dissatisfaction.

SOVIET JOURNALIST ASSESSES OPERATION OF GDR COMBINE SYSTEM

Moscow IZVESTIYA in Russian 4 Jan 83 p 5

[Article by S. Tosunyan, IZVESTIYA correspondent in Berlin: "Experience of Our Friends--GDR: Self-Reliance and Responsibility"]

[Text] The Werra Potash Works. Ninety percent of its output is intended for export to 50 countries throughout the world. In selling on the world market one of the main items of the mineral wealth of the GDR (which occupies third place in the world after the USSR and Canada), the leader of the branch once encountered a difficult problem.

From the moment when fertilizers in granules -- economic and highly effective forms -- appeared on the world market, the traditional importers of output from Werra made the specification: we'll take it only in granules. It was urgently necessary to reorganize production, and that was something that the plant could not have done with its own efforts. But that job was undertaken by the management of the Kali Combine, which now includes Werra. A group of specialists from the combine's scientific center received the task of urgently developing a technological process for producing granulated fertilizers. They were joined by scientific coworkers from a number of institutes. The combine's design bureau executed the blueprints for a unit to produce the new output, and its own plant for producing means of improving production efficiency created the unit itself. Eight months later the plant produced the first tons of potash fertilizers in granules.

"We ourselves established that rigid deadline for developing and introducing the new technological process," plant director Horst Hosfeld recalls. "Otherwise we might have found ourselves crowded out of our traditional markets. And this rapid reorganization was possible only thanks to the precise interaction among all the links in the combine, thanks to the fact that they all had a direct interest in the final result."

In and of itself the Werra Plant is a major enterprise, the daily output of which is sufficient to saturate completely with potash fertilizers the soil on an area of 35,000 hectares. Nevertheless, prior to the formation of the combine, the plant could not carry out independently a single measure of a degree of seriousness with regard to improving the methods of production. It did not have an appropriate technical base. Every new unit that was needed to improve production had to be ordered at a specialized enterprise. And that meant that the plant would get in

touch with its ministry of the mining, metallurgical, and potassium industry; the ministry would conduct negotiations with another ministry, to which the specialized enterprise was subordinate; and then there were prolonged negotiations between the customer and the enterprise executing the order, then the coordination of the design... In a word, it took longer than just one year before the new unit could begin to produce output, and it frequently happened that by the time the new unit was activated, it was far from corresponding to the purpose for which it was intended, since technical progress had marched far ahead.

But then the Werra Plant, the mines to extract potassium salts, and the enterprises that provide the potassium production with special technology united into a single combine. Not all its links are situated very close to one another. There are production entities that are tens of kilometers away. Nevertheless the contact among them is much more simple and much more time-responsive than the contact used to be with the "outside" enterprise that was situated on the opposite side of the street.

. . . Of course the new unit cost a lot of money. Its installation and operation also required additional expenses. All this, naturally, had to exert an influence upon the production costs. But as early as the process of developing the new technological method, the coworkers at the combine's scientific center were given a clear-cut task: find the opportunity to compensate the additional expenses by reducing the costs of the other processes in the production cycle. And that was done, primarily thanks to the strict economizing of raw materials and energy.

When speaking about the role of the scientific center in intensifying the production, the general director of the Kali Combine, Henrich Taubert directed our attention to the following fact: thanks to the scientific organization of labor that was recommended by the center, it was possible for the combine to free 750 workers for other jobs. They were transferred to other sectors and many of them received work that was more highly skilled and that paid better.

The scientific center of the Karl Zeiss Jena Mechanical-Optics Combine, naturally, is more powerful than the one at the Kali Combine: it has more than 5000 coworkers. In addition, each of the 15 enterprises in the combine has a technological laboratory and carries out the search for the most effective ways to intensify production.

The optical devices and the scientific and medical apparatus produced by the people at Zeiss are recognized throughout the world. But no one at the combine thinks about stopping on what has been achieved. By the end of the five-year plan the variety of the output is supposed to be three-quarters renewed. In order to achieve this, it is necessary to reduce even more the periods of time needed to make the scientific development and assimilate the production of the new devices. "Even more" because in recent time those periods have already been reduced on the average by as much as 20 months.

At the Tenth SED Congress it was noted that the factor that must be in the center of the tasks that are assigned to science is the social benefit, the economic effect, and that the key to the decisive increase in the national-economic effectiveness during the 1980's is the much greater economic return on the efforts

expended by science and technology. The fact that the combines' scientific centers are successfully executing the instructions issued by the congress is attested to by the following figures: since the beginning of the year, the centers introduced into production 3000 scientific developments, bringing the republic's national economy additional income in the amount of 13 billion marks and contributing to the reduction in the specific expenditure of raw and other materials and energy by 6 percent, and also contributing to the further increase in labor productivity, judged on the basis of which East Germany has been keeping up with England, although it is still lagging behind West Germany.

The question might arise: why, in the GDR, is the successful overcoming of many complexities in the economy linked, as a rule, with combines, because, after all, the enterprises that constitute them used to exist previously. All the combines are subordinate to the very same ministries. That is true. But the creation of a new structure does not in any way mean the purely arithmetical addition of individual production units. A combine that is subordinate not to a particular main administration or association, but directly to a minister is a scientific-production complex with the closed cycle that includes many components -- scientific research, experimental-design developments (with the corresponding experimental base), series production, sales, and even export.

The composition of the combines also frequently includes enterprises that supply assemblies and semifinished articles. Also attached to them are construction-and-installation subdivisions, the task of which is to help to modernize the existing shops and sectors.

The currently existing form of administration of the economy was introduced in the GDR three years ago. On 8 November 1979 the republic's Council of Ministers confirmed the statute governing people's combines. Of course, this in no way means that the reorganization occurred on a single day. The combines existed in certain branches even earlier: economic experiments began as early as the second half of the 1960's. Their effectiveness was studied attentively for a long period of time. Determination was made of the best versions for each branch, the best forms for interaction between the ministry and the combine, between the combine and its component enterprises and structural subdivisions. Even today the process of improving the system of administration of the national economy is continuing. The versions which, in the opinion of specialists, are the optimal ones have not been found or implemented in all instances. However, one can already state boldly that the combine system in the GDR contributed to the deepening of specialization, the efficient organization of production, and the improvement of the ratio between the production costs and the final results.

The administration of the enterprise within the framework of the combine continues to be carried out by its director. However, the assignments for each enterprise are determined by the combine management, proceeding from the tasks in the national-economic plan. In the interests of the job to be done, the area of specialization of the enterprise can be changed by the general director. If need be, he has the right, within the confines of his competency, to redistribute funds and material resources.

The combine itself, although it is subordinate to a minister who strictly monitors the execution of the plan with regard to volume and variety, possesses practically

unlimited rights in the area of organizing production, and in determining (with a consideration of the market desires) the parameters for the output to be produced. But we would like to re-emphasize: each of the 157 combines that are centrally subordinated also bears complete responsibility for providing the country with the output produced by it.

It was already mentioned that the combine unites enterprises in one branch or subbranch, for example, the potassium subbranch. But there are also multibranch combines. In addition, the combines in various branches are linked with one another by long-term contracts. Close ties exist among combines also by higher educational and academic science. For example, the Karl Zeiss Combine, with its own large scientific center, gives the responsibility, on a long-term basis, for the execution of a number of scientific topics to departments at Jena University. Use is also made of the opportunities for international scientific-technical cooperation, especially with the Soviet Union and the other countries in the Council for Mutual Economic Assistance.

Following the example of large industry, and with a consideration of the specific nature of the branch, the combine system has been introduced in construction and the transportation system of the GDR, as well as in local industry.

For the sake of fairness it must be said: in addition to the advanced combines in the GDR, there also are those which have not been coping with the plans. Unforeseen "bottlenecks" occur. In order to judge the problems that have been arising, the SED Central Committee annually organizes a seminar for the administrators of combines for the purpose of exchanging experience. It is this thoughtfully, creative attitude toward the improvement of the economic mechanism that guarantees the future successes of the GDR economy.

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MINISTRY OFFICIAL INTERVIEWED ON 1982 ECONOMIC REGULATORS

Budapest NEPSZABADSAG in Hungarian 8 Dec 82 p 10

[Interview with Istvan Kollarik, head of the economics main department at the Ministry of Finance, by Katalin Bossanyi: "What Will Change in the Regulations?"; date and place not given]

[Text] The Ministry of Finance's package of regulations about the 1983 changes in the regulatory system was published in early December. How will the financial conditions of economic operation change? What is the essence of the modifications? To what extent can we expect the stricter economic rules of the game to create more favorable than average conditions for the better enterprises to increase competitiveness and develop entrepreneurial readiness-- while encouraging all enterprises to increase their efficiencies? We spoke about these questions--which to a great extent determine the behavior of the economic operators--with Istvan Kollarik, head of the main department of economics at the Ministry of Finance.

Increasingly Difficult External Conditions

[Question] What justifies repeated changing of the regulatory system?

[Answer] Right off I sense a certain sting behind your question, according to which some elements of the regulation are changed too often. However, this problem is better defined as: Can our regulations remain unchanged in a rapidly changing world, especially when the external conditions of economic operation are developing in an unfavorable way for us? Aren't we doing the right thing when we pass on the world economy's changes as fast as possible, and with this also help--provide the incentive and compel at the same time--increase the flexibility and ability to conform to the market, of the economic operators?

In forming this year's national economic plan and the extent of the regulations, we started out from the point that to a greater or lesser extent could already be seen in advance during the time of preparing for 1982 with knowledge of the world economy's growth processes. That is, that

the foreign market conditions will further deteriorate, sales opportunities will become generally narrower, and in some areas the crisis will become sharper. But one new feature of this year's foreign market impulses could not be expected: a complete retuning of the behavior of the international money markets. In a situation which not an easy one to begin with, this circumstance places the requirement on the national economy to achieve a larger foreign-trade surplus than we have imagined before. More specifically: in 1983 we must reach the foreign-trade performance we had planned for the last year of the plan period.

Even during the year the changed situation justified partial modification of the regulations and, for example, in import management it even required operative intervention. The events that occurred caution us that we will be doing the correct thing in the future when we expect the least favorable conditions to occur, and adjust the purchasing power that can be used within the country to the higher requirements. The significance of this is underlined, for example, also by the fact that this year--in spite of the various measures--a wage mass in excess of the national economy's load-bearing ability was paid out contrary to our intentions, and the desire of the enterprises to make investments was livelier than our opportunities.

[Question] What goals does the present modification express?

[Answer] We want to make it more vigorous now in the functions of the regulation that, in addition to increasing the foreign-trade surplus necessary in order to preserve the country's international paying ability, it should provide more incentive than before to increase the efficiency of economic operation, by accelerating the transformation of the production structure and increasing the economy's ability to produce income. That is, actually this means that the economy's growth is moving qualitatively in a new direction. Without this, the resources necessary to improve the foreign-trade balance can be created only by further gradual decrease of domestic consumption, which, on the other hand, is not a path that can be traveled over the longer range. For this very reason, we tried with the present modifications to create harmony between our steps and the modernization of the economic mechanism, and even accelerate this process as much as possible. I would also like to emphasize that even though restricting the domestic purchasing power cannot be avoided, in 1983 not merely additional income distribution--removal--regulations are going into effect, but we wish to thoroughly influence the behavior of the enterprises. Therefore, beyond the possible modification of prices and exchange rates as well as interest rates, which also depend on the market situation, inasmuch as this is possible, we do not want to change the regulatory elements along the way. This also justifies starting 1983 with a very strict system. Of course, it must also be seen that this is not only a matter of intention.

#### Reasons for Income Removal

[Question] Let's look at it more closely now, too: what is changing? Let's talk about what always hurts the enterprises the most: income regulation. Can it be expected that profits will be further tapped?

[Answer] In addition to strictly regulating purchasing power, our aim is to develop a more consistent profitability selection among the enterprises than before, based on efficiency. The tax on profits is not increasing in 1983, we are decreasing the spendable resources of the enterprises so that the change will hurt less than increasing taxes on profits of those who operate well and profitably. As of 1 January 1983 the social security contribution increases by 3 percent. This may contribute to the more reasonable use of live labor, and also makes it possible for the budget to decrease its social security expenses somewhat.

Removing 7 percent of the development funds of the enterprises serves to slow down the investment process. The extent of removal is 4 percent in the transportation and communication branch and in the speciality branch of housing and communal construction. In the cooperative sector--due to the different ownership format--we are freezing the funds. Part of the removed sums will increase the loans for expanding the export-goods funds, and the external resources provided for the costs of energy rationalization. Lowering the amortization key for buildings will also moderate investment purchasing power. There is no doubt that profits will increase because of this, but this will mean additional development resources only in 1984. Further narrowing the spectrum of construction for which taxes do not have to be paid is designed to cut down on the ratio of construction in investments, and at the same time helps to control the investment process better. After 1 January 1983 the enterprises are not allowed to use the contents of mandatory reserve funds and deposits formed prior to 1980 and treated separately in this past time period, which serves the purpose that the use of the development funds can be planned reliably.

#### Improving Competitiveness

[Question] These measures will not be too popular, but in today's situation they are probably necessary. But--it appears--there are more incentive characteristics in next year's wage and income regulations.

[Answer] Absolutely, since this favors primarily those who operate efficiently; wage raises are primarily the function of profitability and taxpaying ability. In the future, the enterprises can increase their wage levels depending on their yearly profitability. The scale is: each percent of the profitability rate makes 0.12 percent preferred wage raises possible. Payments into wage development [fund] will be eliminated, and instead of this, wage increases and formation of the profit-sharing fund alike will be subject to the progressive taxation of the profit-sharing fund. From this viewpoint, the amount of wage increases must be considered as three times the use of the profit-sharing fund, but the progressivity of the tax rates is moderated. It is important that formation of the profit-sharing fund is subject to tax from the very first forint, but we ensure discounts from the tax for various reasons. For example, in case of cutting back employment or employment regrouping, 30 percent of the wages saved can be used free of taxes. The connection between profitability and the opportunity to raise wages is further strengthened by making it more difficult to use the reserve fund to finance the shortages of the profit-sharing fund. That is, the mandatory reserve fund used will have to be paid back in the following year.

[Question] How will the regulation changes help those enterprises which are standing their ground in world market competition and have been exporting profitably even in the past?

[Answer] The active exchange-rate policy influences more frugal utilization of imports and better exploitation of export opportunities. The situation of exporters is more favorable after the exchange-rate modification of 30 November of this year, by virtue of the fact that they receive more forints per unit of foreign currency. The rest of the modifications are connected to the price system. It is also favorable that for revolving fund loans related to successful capitalist export, the Hungarian National Bank [MNB] is increasing the opportunity for interest refunds by an average of 5 percent.

#### More Vigorous Differentiation

[Question] To what extent can it be expected that, as a consequence of the measures, greater-than-before and realistic income differentiation which reflects the enterprise performances will develop among the economic operating units?

[Answer] In spite of some necessary measures, we wish to strengthen the normative character of the regulations. This means that the general burdens will hurt the enterprises with below-average efficiency more, but for the better ones they provide greater opportunities than before to open up their reserves--though it is more accurate to talk about prevention of sources of loss. This will even by itself reorganize the enterprise positions--I think in the right direction.

The basic condition for more efficient economic operation and for flexibly conforming is that the means available to the national economy should operate where the greatest income can be expected. Progress can be expected next year on two points in developing more vigorous movement of capital than at present. We have worked out the system of handling enterprises with low efficiency. After careful evaluation--taking into consideration what external and internal reasons caused the lasting unfavorable situation to develop--we will decrease or eliminate favorable treatment for these enterprises, place clear requirements on the enterprise management, and evaluate whether or not they are able to conform to these. Regrouping the enterprise's means and resources may take place in this area, and even the closing down of the enterprise as the final resort. Means and manpower may thus become available for those who operate efficiently. It is also important that if the MNB and the Price Office classify the property management of some enterprise as poor over the long range, the Ministry of Finance may remove a maximum of 10 percent of their revolving fund.

Another way to accelerate the movement of capital is the more favorable opportunity to organize new enterprise forms, partnerships, joint enterprises and contributing associations. There are new rules in effect for the conditions under which economic operating organizations may regroup their development resources and reserve or operating means to other enterprises. It will also have a beneficial effect and promote the increase of

joint capital that the interested enterprises are free to make their own agreements about interest that can be charged for development resources transferred as loans, and about the extent of sharing in the profits produced by permanently transferred resources. The banks may also enliven the movement of capital with new, enterprise-type formats. Issuing and purchasing bonds is also an important opportunity.

[Question] Because of the difficult economic situation there are also many prohibitive and sanctioning elements in the new regulations. Will this not decrease the enterprising ability--instead of the desirable strengthening effect?

[Answer] My opinion is that making the regulatory system more strict will give less room in the future to enterprises which take a waiting position and play tactical games. Those who do not conform to the new requirements and do not increase their efficiency will fare worse than before. Those who are capable of renewal will remain standing. At the same time, I would dispute that we are applying primarily just negative incentives. Parallel with modernizing the direction--and this can also be traced in next year's regulation changes--the independence of the enterprises will increase. I will only mention as an example the new system of forming the technical and development fund, where we will maintain mandatory formation only for the state-operated machinery and chemical industrial enterprises with high research needs, while elsewhere the enterprises will have complete control over deciding how much they spend for this purpose.

Further development of the interest system of enterprise workers in leadership positions is also a part of invigorating initiative and enterprising ability. Here also the opportunity opens up for incentives which conform better to performance--and as a consequence of this, are more differentiated--since the amount of bonuses which can be paid comes into closer relationship with the profitability of enterprises with the use of the new multiplication keys. Upper limits on bonuses are also eliminated. Expansion of the competitive system of selecting managers and appointment for limited lengths of time may lead to strengthening managerial suitability and enterprising ability. Similarly, the new sphere of tasks of the control commissions and managing councils and their broader organization may also promote more flexible directing and control work and more democratic management.

[Question] In conclusion: weren't the new regulators issued a little too late?

[Answer] Obviously, it would have been better for the economic operators if they could have familiarized themselves with next year's rules in midsummer. However, regulation can not be made independent of next year's plan: it could be developed only with precise knowledge of the main national economic goals and conditions, to help implement them. By the way, these modifications are not completely new to the enterprises, since their development was preceded by extensive consultation.

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DEBATE ON FUTURE ECONOMIC MEASURES ENDS

Statement by State Secretary Hoos

Budapest HETI VILAGGAZDASAG in Hungarian 11 Dec 82 pp 34-36

[Text] The debate that has been conducted on the pages of our journal over a period of several weeks has now reached its end, and we thank our readers for their active participation. If we count also this issue, we have been publishing the past 11 weeks articles on the Hungarian economy: argumentative writings, and responses that supplement or develop further what has been written earlier. In the following, as the last contribution to the debate, we are publishing a lengthier article by Janos Hoos, state secretary of the National Planning Office.

Rarely has the Hungarian economy had to confront such serious challenges as the one raised by the present situation of the world economy. Today its weight and detrimental consequences are being felt more and more directly not only by the enterprises, but by the general public as well. Therefore the keen interest in economic questions, the pondering and ever-wider debate in the press and the economics literature are understandable. Very true are Marton Tardos's concluding words in the first article that opened the debate in HETI VILAGGAZDASAG: "Proposals are needed from many persons, for the situation is difficult, the task awaiting solution very great."

The Hungarian economy has been presented this challenge at a historical moment when its development depends to a much greater extent than before on the utilization of export opportunities, on the development of external economic relations. At the same time also domestic economic development has reached a level such that to surpass it--even under relatively favorable external economic conditions--poses substantially greater tasks than previously. As a combined effect of all this, not only has development or growth become more difficult, but in many respects also its possibilities have become limited. In this situation it is not easy to offer a recipe for solution, and it is especially difficult to find some miracle drug because, as we very well know, it is not "miracles" that are the vehicle and motive force of development. At the same time it is also evident that the rate of economic growth has slowed down not only in planned economies of the socialist countries, but also in the market economies of the capitalist countries. The capitalist world is struggling with a serious crisis of the kind rarely encountered in its history. Those capitalist countries that do not merely write

on their ideological banner the slogan that the market, profit and competition are omnipotent, but who assert this principle in practice as well, have also been forced to suffer a decline of their output and a slowdown of their standard of living, together with large-scale unemployment and inflation.

Thus it appears that for a given country the solution--or to use a more fashionable expression, the "way out" from this tight situation--does not depend simply on providing the widest possible room for the action of market forces, respectively on making central planning and management more effective, in other words on perfecting the economic mechanism, but also on how the real conditions of economic activity change, especially in the area of international relations: on whether the marketing opportunities are expanding, and whether a reordering of certain political priorities is possible. It is necessary to take into account also such circumstances as how the material and energy resources can be expanded through the exploration and economical development of new deposits, parallel with the more efficient use of materials and energy and with technical development.

This applies to the present situation of our country as well, but essentially this has been the situation also during our previous development. In this context it will be of interest to point out that several favorable external and domestic--and mostly objective--factors, besides the economic reform, also contributed to our relatively rapid economic development after 1968. Let us recall here merely the favorable external economic conditions that existed in our economic relations with both the socialist and the capitalist countries: there was a period of boom in the world economy, the terms of trade tended to improve rather than worsen, and from the 1960's on we were able to enlarge significantly our hydrocarbon reserves. This trend is supported also by the following data: the capitalist world economy had an annual growth rate of 7.3 percent in 1948-1971, 8.6 percent in 1971-1974, and only 3.8 percent in 1974-1978. This slowdown is continuing. It is likewise a fact that the volume of the CEMA countries' foreign trade will remain essentially unchanged in 1979-1981. The price losses that Hungary suffered as a result of the worsening terms of trade in 1972-1982 exceeded 10 percent of national income. Unfortunately, we will be unable to avoid price losses, although not of this magnitude, in the coming years as well. It is undeniably true, and cannot be emphasized strongly enough, that the 1968 reform of economic management enhanced considerably our utilization of the mentioned favorable factors of our economic development, and that we would have been able to achieve only more modest progress without the economic reform.

But we may also conclude that under the present conditions, and in the short term in particular, not even the most rational and complete perfection of our system of economic management could by itself offset completely the enormous, and for us unfavorable, changes in the economic conditions. From this it does not follow that further development of economic management is unnecessary. To the contrary, today its further development is even more demandingly necessary in order to reduce as much as possible the drawbacks, and especially so that we can switch the Hungarian economy as soon as possible to its new growth path, one that can permanently neutralize and reduce the drawbacks, or can guarantee that the Hungarian economy, under a more favorable set of external economic conditions, will fully utilize the opportunities available to it.

Switching to this path, however, requires not only the further development of economic management, but also another reassessment of our economic policy

objectives, and their modification if necessary. In other words, the answer to the mentioned challenge must be sought not only in the further development of economic management, but also in the practical further development of economic policy and, when necessary, in adjusting the objectives to the new conditions.

In my opinion, the debate in HETI VILAGGAZDASAG concentrates on economic management and seems to forget somewhat about economic policy. Although it is indisputable that the further development of economic management is indispensable to the assessment and possible correction of the economic policy objectives, economic policy does have a certain, and by no means negligible, independent existence that substantially affects also economic management. We may regard economic policy as the expression of the real, essentially objectively given, conditions of economic activity, respectively as adjustment to these conditions; in other words as the expression of adjustment to the external economic--and perhaps foreign-policy--requirements, to the country's natural conditions, manpower and level of technical development, to its political and economic-policy commitments or to the structure of such interests, and to society's tolerance of conflicts. Within the limits specified by these conditions, economic management reflects or supports economic activity's framework of interest relations, or its framework and mechanism of organization and decision-making. Only the joint development of the two, with due consideration for their interaction, can provide a meaningful answer to the existing challenge.

In the course of formulating economic policy it is possible to judge what economic development can actually be achieved, and what price will have to be paid for it. From all this it also follows that solely a radical transformation of economic management, if the conditions permit such a transformation, will not necessarily accelerate growth and raise the living standard, especially not in the short term. This depends to a large extent on the aforementioned real processes that shape economic policy. In this context, regrettably, we must also mention that amidst the Hungarian economy's present conditions and due to the real processes--the constriction of the market, the substantial losses resulting from the worsening of the terms of trade, and the economy's structure at its given level of development--not even the possibly most rational further development of economic management could ensure in the next few years a dynamic rate of economic growth (the kind we were accustomed to in the past) and a corresponding improvement in living conditions.

I emphasize this because several contributors to the debate in HETI VILAGGAZDASAG can be interpreted to be saying that if we had reformed or will reform our system of economic management, we would have been able to avoid or will be able to avoid in the near future a slowdown of economic growth and the related much more modest rise of the living standard. I believe that the situation, unfortunately, is much more complex.

What objective an economy is able to realistically set depends also on how the set of external economic conditions develops, on what domestic conflicts the economy is able to tolerate without upsetting the stability of entire society, and of course also on how efficiently the economy is using the available production and external economic possibilities. From the viewpoint of these possibilities, the economic mechanism is unquestionably decisive, but we should add that the set of external economic conditions is not indifferent also from the viewpoint of the specific nature and functioning of this mechanism. (Consider,



for example, the present very constricted credit possibilities, or the modest import possibilities.) Thus we must act in many more directions and in many more areas in our search for a response to the challenge and cannot concentrate merely on the further development of economic management.

At the same time we must formulate our tasks more comprehensively within economic management itself, developing jointly our planning, economic regulation, system of institutions and system of organization. In this respect I fully agree with Robert Hoch's statement: "It would be naive to believe that we can achieve serious results merely by developing further, no matter how radically, the market mechanism. Or that the market mechanism can be developed further at all, without meaningful progress in perfecting economic policy and national economic planning. Economic policy, planning, the economic mechanism, regulation and the system of institutions constitute an integral whole, and not one of these elements can be developed further significantly without developing the other as well."

In accordance with the majority opinion among economists, as the principal directions for economic management's further development we can accept the ones outlined in the debate, thus including also the proposals presented by Marton Tardos in the first article in this debate. But at the same time I would like to emphasize that relatively significant tasks must be solved even before the practical introduction and realization of these proposals. To no small extent because the specific elaboration of these proposals that is necessary for their practical introduction, and including also the assessment of their sociopolitical impact, is still at the very beginning. Nor can we disregard the social conflicts that will accompany the proposed changes. Although the contributors to the debate did refer to these conflicts, I believe that much greater significance must be attributed to them.

It is indisputable that there can be no progress without these conflicts, and we must be far more willing to accept them than at present. To put it differently, in the interest of national economic stability we must purposefully disrupt local stability and accept the associated smaller conflicts, in order to avoid a greater conflict resulting from the disruption of the economy's stability. A broader understanding is necessary of the fact that the necessary changes will not be a painless process, and also that to this end we will have to temporarily abandon our achievements to date in some areas or to reorder certain priorities. On the other hand we must consider society's tolerance of conflict mentioned earlier, i.e., we may proceed only up to the limit where the various local conflicts jointly do not yet cause a society-wide explosion. Essentially this is what Laszlo Antal refers to when he states: "In the present situation a radical expansion of the competition mechanism's sphere of action would in itself be able to trigger a process of solution only after a serious setback."

It is no accident that market forces are more or less restricted even in the most liberal capitalist countries. Emphasizing that the satisfaction of the customers' requirements and needs, the market, is an essential condition for a solution. From the preceding it likewise follows that also the effectiveness of purposeful and plan-conforming central state management must be improved parallel or in harmony with this. The effectiveness of central management must improve in the setting and formulation of economic policy objectives, respectively in the purposeful and better coordinated formation of the instruments of management that serve the realization of these objectives. Among the instruments of

management we of course have in mind the further development of the market categories, of prices, credit, interest rates and foreign-exchange policy, and also of national economic planning, system of institutions and system of organization.

Differing slightly with the arguments presented in the debate, I personally believe that purposeful and plan-conforming central management of the economy, economic planning, must have a more meaningful role. I of course do not limit planning to merely the central planning organ (National Planning Office) but include in it also the planning activity of the central state managing organs that relies appropriately on the planning activity of the local councils and enterprises and considers the merits of the opinions presented by various common-interest organizations and institutions. But at the same time the central planning organ must be assigned a special role in this work, particularly in the areas of coordination, organization, reconciliation and synthesizing. Under socialism, this is the only way that the instruments of management--including the categories and laws of the market--can be operated or asserted effectively while satisfying also the requirements of social stability.

There are important tasks also in specifying the objectives of economic policy so that they take the new situation into account. Because of space limitations, only a few of the principal directions of change and requirements can be pointed out. The objectives of economic policy must be specified on the basis of the requirements posed by the new economic path and by proceeding along it. For example, from the viewpoint of distribution it is necessary to regulate anew the sharing of the burden among the state, the enterprises and individuals, and certain priorities of the policy on the standard of living and of social policy may have to be reordered. In the area of production the tasks of developing the production structure must be adjusted to the altered situation, and we must rethink the industrial policy we wish to pursue. And especially in conjunction with the basic materials and energy sector, and also the manufacturing sector, we will have to find for the problems of the so-called crisis industries answers offering permanent solutions. The setting of more specific developmental directions and alternatives in our external economic relations also belongs here.

In the course of all this there could be reformulated priorities that, directly or indirectly, will have to be taken into account also in the further development of the system of economic management. Furthermore, this could yield information that might influence the specific rate and manner of economic management's further development.

Work has already started in the directions outlined above. This is clearly evident from the continuous series of government measures. Since 1979, together with the essential correction of economic policy and the modification of its path, considerable progress has been made in the systems of organization and institutions (at the level of the ministries and in the enterprise sphere as well), in substantive corrections of the economic regulators, and in introducing the competitive price system that is oriented toward the world market. Practical experience has revealed the weaknesses and side effects of these measures, and we realize that we must proceed further, but at the same time we are not underestimating the favorable effects of the said measures. The state organs--in cooperation with the competent social organs and scientific institutions--are not only

concentrating on annual planning, which necessarily shapes the economy the most, but are also doing extensive work on reassessing the possible paths and modes of development through 1985. Long-range planning through the year 2000 has been going on for several years, and the comprehensive report on it will be discussed next year before the competent forums. The principle of relying on a broad social base has been asserted particularly in this planning.

Comprehensive modernization of economic management likewise is proceeding systematically, with the requirement that as much of the results as possible be utilized already through 1985 (i.e., under the current five-year plan), and that we have a significantly perfected system in place under the Seventh Five-Year Plan (1986-1990). As yet we are unable to contend that we have the complete solution in our hands or, unfortunately, that what we regard as the solution today will actually be the final one. Under the present conditions of the world economy, there is no guaranty for this. Therefore we truly must be open-minded in every respect. We need the widest possible exchange of views and consultations, constructive debate that hears and carefully weighs every proposal and idea. In other words, democratism's possibilities and rules of the game must be maximally utilized and observed.

The work cannot end, and the debate cannot be declared closed. We must speed up the elaboration and introduction of the proposed solutions. For this it is essential that we interpret uniformly the characteristics and difficulties of the principal tasks, that we do not question one another's constructive intentions in debate, and that we allow possible mistakes on the basis of such intentions. But at the same time we must also have the courage to admit our mistakes when we become convinced that we have been mistaken. The task is so great that only new truths and results, and the mistakes and errors that inevitably accompany them, can lead us to further progress.

#### Editors' Comment

Budapest HETI VILAGGAZDASAG in Hungarian 11 Dec 82 p 34

[Text] Leafing back in the published issues, reviewing the multicolored and often passionate contributions, the mature and immature ideas, the realistic proposals and the illusions, one thing is unquestionably edifying: such exchanges of views and constructive debates can provide a basis for the solution of the difficult problems confronting us, because we need every proposal presented with the intention of improving, every progressive idea, to get ahead.

Coming to the end of the debate in HETI VILAGGAZDASAG and without any claim to completeness, the editors merely wish to add a few comments to the numerous and wide-ranging ideas that have been presented. Our first comment is that considerable work still awaits researchers, the competent heads of state and social organs, and their economists, before the work in progress yields a mature and practically applicable comprehensive economic mechanism as a result of the 1968 economic reform's further development.

It is worth noting in conjunction with the debate that our economic tasks have shifted more than ever before toward social policy in terms of its weight and significance. Only a qualitative change in economic activity provides a

possibility to maintain a peaceful social situation. Therefore the assistance of the social and political organs is necessary for the solution of the economic tasks; they must help to develop the entrepreneurial behavior of the enterprises and their collectives. They must oppose skeptical conservatism so that differentiation between the successful and less successful working collectives may become an important method of resolving the stresses. One of the social conditions for developing further the system of economic management is also that we do not forget the social strata who, through no fault of their own, have become the losers in the difficult economic situation, and for whom the economy does not offer any opportunity for self-defense; we must give careful consideration to the proposals advanced in the debate, for aiding these strata.

Mention should be made also of some of the illusions that have surfaced. It is unfounded to believe that, instead of stimulating capitalist export, it would be possible to drastically curtail our economic relations with the West, and that turning inward could provide a solution to our problems. We cannot strengthen further our relations with the socialist countries if we do not improve our balance of payments with capitalist countries, by increasing the ability of our enterprises to adjust; after all, for the rising bill of our import from socialist countries we must pay with commodities whose production requires more capitalist import than in the past. Likewise false is the notion that detailed central interference through compulsory planning directives, instead of broader enterprise independence, provides the way out from our present difficult situation. But equally illusory are the ideas that wish to abolish state control of the economy, under the pretext of market competition and enterprise independence.

And last but not least, in the course of the debate no one has denied that the economic stresses, caused by objective and subjective factors, will be affecting the lives of us all. The living standard's rapid rise has faltered, and a certain decline seems inevitable in the living standard of a substantial proportion of the workers. It is likewise indisputable that we can successfully confront our difficulties only if economic management, the managements of the enterprises and wide social strata recognize the dangers to which several contributors to the debate in HETI VILAGGAZDASAG have called attention. In the future it will not be enough to do what we have been doing up to now, for the conditions have changed, and only an economic atmosphere that compels the enterprises to increase their profit sensitivity and ability to respond can offer a long-term solution.

In the new situation, enterprise managers must respond promptly and accurately to the domestic and the foreign demand; for their workers they must create substantially stronger incentives than heretofore, so that the increased tasks may be fulfilled. Every stratum among the workers must feel that it is possible to improve their own lot, and thereby the situation of society as a whole, through more diligent and more intensive labor. The success of economic activity has always depended on initiative in the shop and at the work station, and it depends on such initiative especially now. The complacency of the large plants cannot be overcome solely by developing small-scale entrepreneurship.

Only productive and therefore well-paid job opportunities at large enterprises, in combination with small enterprises that provide a suitable profit even when they remain within the law, can lead to a penetrating success in the Hungarian economy.

SOCIALIST IDEALS NEED NOT BE SACRIFICED TO EFFICIENCY

Budapest NEPSZABADSAG in Hungarian 27 Nov 82 p 3

[Article by Pal Eotvos: "What Should We Listen To?"]

[Excerpts] The question of "What should we listen to, our brains, our intellect, or our heart, our feelings?" is an oversimplified, or we might say banal way of wording a political and economic policy dilemma which characterizes not only these days but perhaps also the whole era we live in.

Social policy or differentiation? Security or work discipline? Are we to follow our sense of fairness or sense of reality when deciding certain issues? Should the political or the economic viewpoints govern?

Sets of opposites that can and ones that cannot be contrasted with each other, become defined depending on the intentions, store of information, situation, and often even on the momentary impressions of those who define them. However, whichever way they are, the contrasts do exist, for example--to mention just two sensitive actualities--in debates about full employment, on the one hand, and differences in income, on the other.

But without getting too far ahead of ourselves, let us pose the question here: are the alternatives really the issue in these cases?

The Politics of Common Interest

Of course, it is a natural thing that the question of--to put it with simplifying terseness--"What should we listen to now?" also keeps recurring in this country in our debates and in the evaluation of the decisionmaking mechanisms. There exist opposing solutions, contrasting definitions, and there is the pondering of "For what should we spend that little money which remains?" However, in the basic questions the purpose and function of politics is to coordinate these interests and methods in a way which produces the least contradiction in the whole society. To represent the common interests, if for no other reason than that there is no party, class, group, or stratum with opposite interests which would hope to derive profit from "radical solutions."

## Disciplinary Force?

These lines, defined perhaps in a rather declarative style and apparently moving on a plan of theoretical abstractness, have the right to exist for the purpose of dispelling certain misunderstandings. For example, for the purpose of dispelling the misunderstanding that our economic policy decisions could be divided into two parts according to "sense" and "feeling," and in this distribution the ones pursuing the social goals were the political ones, and the economic ones the reasonable, the rational ones. In another sharper but clearer definition, this same thing sounds like this: "Even though the methods and opportunities do exist for making the economy more efficient, politics does not accept these for theoretical or other reasons."

As if the comprehensive decisions aimed at making the operation of the economy efficient were not born right in the political forums....

The reason for the problems and lags in implementing them can least be found in the lack of decisions on the political level. All this, more specifically:

Among the sensitive actualities mentioned above, the question of full employment was not put in first place without reasons. Nowadays, preventing unemployment lives in public opinion as an "emotional" decision, and this includes the opinion that the decision is without a certain rationality, that it hinders rational solutions, among others, the one that we should at last put into order the fate of our enterprises which operate at losses.

Leaving it out of consideration for the time being that there is not one single government or political entity in the world which expects even the slightest contact with the masses, which would write unemployment on its flag--not considering this now--it is worth remembering that in this country the political program made not simply the avoidance of unemployment, but full and efficient employment its goal, which is truly acceptable as a program.

Of course, it is a different question--and we can see this around ourselves--that we are not exactly close to implementing it as far as efficiency is concerned. And what should happen until then? Where should we make concessions? From full, or from efficient employment? Well, inasmuch as possible, we cannot brutally pass the difficulties deriving from the unsolved problems of the entire society onto the shoulders of any single stratum, group, or collective. Actually there are also reasons of principle for this. Notably, that in this country the right to work is a human right declared by the constitution. To strike someone is a defenseless situation with the most severe economic sanction, to break his/her life in two, expose his/her family to destitution, is a "solution" foreign to man's humanity, and consequently to our society. And though even these "only" theoretical, or if we prefer, political reasons would be sufficient, it still cannot be said that we are simply listening to our feelings. Society has to support the unemployed anyway, and if unemployment within the gates demoralizes inside the shop, then unemployment outside the gates does so there, the consequences of which are even more severe. On the other hand--to repeat this the hundredth time for reasons heard a hundred times--unemployment is not a tool of discipline but a consequence of production disturbances. Everywhere in the world. There is,

of course, also a disciplinary element in its effect, but work discipline is much more the function of organization, culture and incentives. To support this, let us mention here instead of the domestic experience the fact that in the capitalist plants discipline was firm even when there was no serious unemployment.

Thus, our mere theoretical position against unemployment is hardly the reason why there is plenty to criticize in our plants even now about the situation of work discipline. Not to mention that the manpower balance acceptable to politics would have just as much disciplining force. Would, but does not.

### Concealed Tensions

And let us now move on one step further to a problem which is even more timely and pressing now: our "emotional attitude," that is, political hesitation is also not the reason for to this day having made no, or just barely any, progress in putting into order the fate of enterprises unable to stand the competition. This can be stated even more so because politics clearly takes a position in this question, and if we prefer, the economy has received a free hand from politics to implement "rationality." This is so even if in this case, too, the decision considers it to be its basic principle to avoid unemployment if possible, and made it its goal to affect organization through organized regroupings and reorganization of capacities. We mention this rather just as a reminder: in connection with this sphere of questions, politics has repeatedly declared that we can recognize the right to work rather than to the place of employment, and it has also been said that we will also accept the unavoidable tensions in organizing the future of plants in difficult situations.

However, the tension today is surfacing far from where it should be expected. It could be said that it is to the contrary. Along with (or in spite of?) the production problems within the plants, which are temporary and occur now and then, it is enough to open any daily paper, or to walk by the factory gates of industrial districts to obtain a picture about the manpower supply and demand situation. In some of our plants, "cotton employment" forms a somewhat soft bumper surface, while elsewhere the lack of manpower causes serious production problems. And it is not at all rare for the two phenomena to occur simultaneously within the same plant. Full employment is a burdensome task for the plants even today, at the same time they are struggling with a "labor shortage" which also involves the limitation of some activities, from time to time not only in the capital city and not only in the area services, but often there is a manpower shortage in the plants struck by the crisis and also in their vicinity. Thus the tension, which politics has long accepted, does not even occur. Because what should move, for example, the workers in industrial branches in crisis or in plants operating at a loss to consider the difficulties of changing employment or trade, when often in these areas the wage raises are larger than in the most progressive plants? To this day, any larger size and organized retrainings have been isolated phenomena and aimed mostly at replacing manpower, and to this day there is no trace of any such program--we could write: campaign--of nationwide scale to support the change of structure. Mostly because, it appears, there is no need for it since the force needed to cause tension has not appeared. Overemployment--where it exists--relaxes performance requirements, thus severely hindering the success of efforts made to provide incentives. For the same pay, one has to work hard (at times even

too hard) in one place, while elsewhere the same can be earned with simulated work. The business and social practice of "equal pay for unequal work" tolerates, and even reinforces the distribution-centered approach which demonstrably exists anyway.

Concealing the tensions behind factory gates makes it possible for the tangential interests to put on a false political facade. The tension-causing effect regularly appears only on the "general level," and this presents an almost unsolvable problem to the central government. That is, it is unjustified to burden either the political or the administrative centers with the planned redirection of even several hundred people, which the central leadership organs have to handle. At the same time, the local organs are not really forced to bear either the political responsibility which falls--more precisely, which does not fall--upon them, or to intensively seek the practical solutions (manpower regroupings). Thus they do this rather just as self-motivated activity, and while it would be a serious mistake to undervalue the significance of this, compulsion would be a greater driving force.

#### A Matter of Principle and Reasonable

Of course, it would be an unwise oversimplification to state that just some good measures would be necessary and things would go all by themselves. Deep structural changes are needed in order to eliminate production which operates at a loss. This is a long process even with the greatest of efforts, if for no other reason then because the complete task is not to simply eliminate this activity but at the same time also create efficient production. And this--to say no more--requires capital, but nowadays we have been rather short of investment opportunities. Indeed--even in spite of all appearances--just identifying the group of businesses which really operate at a loss is an extremely complicated matter. It is related to pricing questions, evaluation of the effects of market booms and slides, import opportunities, and many other things. But even when we know and are familiar with all this, we could repeat what we said above.

Thus, these lines are not dictated by unjustified impatience, particularly because we would rather have anything than some kind of a "single factor" solution again which oversimplifies the economy's operation. There are enough, even too many, proposals for such solutions. It is much more necessary to clarify that the most decent intentions of politics to avoid unemployment does not mean that it approves overemployment, and the problems experienced here are not consequences of our principles.

Just as, as long as we are talking about this, it is just as much a mistake to simply pack the various measures enacted for improving the economy, for enlivening initiative and the enterprising spirit--which measures in practice will obviously also involve some tensions--into the bag of "making concessions to rationalism." These are also not only "reasonable steps" since, among



other things, we expect their economy-boosting effects to increase the resources needed for social care. Through them we will, for example, create one of the--clearly far from being the most important, but nevertheless one of the--possibilities for the useful employment of the manpower made available, knowing, but in this case not accepting also, the often, and at times unilaterally, blamed temporary effects of "undesirable phenomena."

Thus the comprehensive decisions of politics are dictated not by the simplified question of "What should we listen to?", by the "heart" or the "brain" which is in contrast with it, but by the most universal coordination of interests, by the harmony of principles and reason.

What must and should be done fits into both. This can also be defined like this: it should be done, since it is compatible with both.

8534

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# REGULATIONS SEEK EFFICIENT USE OF INVESTMENT CAPITAL

Budapest FIGYELO in Hungarian 9 Dec 82 p 13

[Article by Agnes Balazs: "For the More Efficient Investment of Developmental Resources"]

[Text] The rate and nature of our economic development depend on the extent to which the incomes available for investment and plowed back into production aid the improvement of effectiveness.

A basic principle of economic management is that the disposable incomes of the economic units must reflect the proportions that arise in the profitability of the individual enterprises. Which in other words means that the enterprises with higher profits should be able to spend more income. This in itself creates a favorable starting point for developing a suitable investment structure. At one time there was passionate debate on the unsuitability of this system, because the possibility to spend income was linked to the effectiveness of the already existing resources, whereas it should have been linked to the foreseeable return on investment. From the viewpoint of investment the effectiveness of a future investment is undeniably the decisive criterion. However, such an investment structure must be achieved not by attempting to approximate it with the help of some contrived method of income formation, but by providing ever-wider opportunity for the regrouping of the available developmental resources, on the basis of economic interests. The measures just introduced to enhance the flow of developmental resources serve this purpose.

We are in a stage of economic development where the national income that can be spent domestically provides narrower possibilities for increasing enterprise investment. For a change of the economy's structure under these conditions it is not enough to invest, in a suitable structure, merely the generated additional income; it is unavoidably necessary to also regroup resources from the areas where they would be used with only low efficiency, to the areas where they can be used more effectively. This form of the flow of resources has been rather unusual up to now, but it is unavoidable in the present economic situation. In such cases the state--if the enterprise in question is a state enterprise--must exercise its rights as owner, because today the managers of the affected enterprises cannot be expected as yet to voluntarily cut back the activity of their enterprises.

Under the present economic mechanism there do exist forms and channels through which developmental resources can flow, within certain limits. Because the significance of the flow of resources in improving effectiveness has increased,

it seemed expedient to allow as much room as possible for the regrouping of resources, and it appeared especially important to gain the acceptance of forms in which incentives linked to higher profit played an important role. It would be illusory to expect that broader forms in themselves will increase overnight the intensity of the regrouping of resources. However, this does not question the need for regulations that will enable these new economic forms of the flow of resources to develop.

The existing forms of regrouping resources will be retained. Development credits are and will remain the most important of these forms. But if the individual forms of the flow of developmental resources are to be mutually complementary and simultaneously applicable, credit practice must become more flexible so that an enterprise may participate in the flow of resources in several forms.

The statutory regulations that have been in force already permit an enterprise to transfer its developmental resources, temporarily or permanently, to another enterprise. In this respect we deemed two measures necessary. The statutory regulations did not prohibit an enterprise to stipulate some material or financial compensation from its partner enterprise when transferring developmental resources to it permanently. In most cases, however, resources were transferred between economic units when the transferring enterprise was at a certain disadvantage in its production relations with the receiving enterprise, and the other financial aspects of the transaction were somehow lost. In order to make the financial interest in transferring resources real, in the modified regulations on profit taxation (Decree of the Minister of Finance No 68 of 30 November 1982) we have indicated that the transferring enterprise may also stipulate for itself a share of the return on the investment.

In the case of a temporary transfer of developmental resources, the statutory provisions up to now limited the rate of interest to the maximum interest rate that the bank pays on deposits. According to the decree on profit taxation, the two enterprises may now freely agree on the rate of interest.

According to the modification of the regulations governing surplus capital assets (Decree of the Minister of Finance No 69 of 30 November 1982), a new variant has been added to the forms of utilizing capital assets: the transferring enterprise may require a use charge, without any time limits, for its operating capital assets, the depreciation for the replacement of which is now formed at the receiving enterprise.

In the regrouping of developmental resources, unwarrantedly small is the role of the form under which an enterprise receives developmental resources permanently, and the transferring enterprise gets back not the resources and the interest payments on them, but a share of the return on the investment; in other words, the transferred resources become a permanent part of the enterprise's assets. We wish to call attention to this possibility as one of the ways of transferring resources between enterprises, but in our opinion the financial institutions play the decisive role in this form of transferring resources between enterprises. There already are initiatives of this type. For example, the Hungarian Foreign Trade Bank (Magyar Kulkereskedelmi Bank) has a venture fund; the State Development Bank (Allami Fejlesztési Bank) has already participated in such activity; and next year we intend to broaden the banks' opportunity to invest in the activities of enterprises as business partners, sharing in the proceeds.

To efficiently invest temporarily idle resources, we will provide the statutory framework for issuing bonds. One characteristic feature of bonds is that their purchase is entirely voluntary. Within the economy, bonds can contribute in several ways to the regrouping of developmental resources. For their entrepreneurial activity the banks and financial institutions can obtain the necessary capital by issuing bonds. We wish to enable also economic units to issue bonds, but of course through professionally qualified financial institutions. Bonds are not limited to their role in the temporary regrouping of the enterprises' developmental resources. Already this year bonds will have to finance the budgetary deficit. The possibility of issuing bonds provides greater freedom of action also for the local councils in undertaking community development projects, because in this way they are able to borrow the necessary capital. And the question of whether the bonds will be subscribed or not will influence also their choice of developmental objectives. The sale of bonds to the population will require special permission. Such bonds may be issued to finance only objectives related to the population's demand for municipal services and housing.

Statutes will regulate the specific conditions for the issuance of bonds only to the necessary extent. The bond's maturity, interest rate and other essential financial conditions will be set basically by the issuer, who will have to consider also the prospects of floating the bonds. However, the interest rates on bonds sold to the population will be regulated centrally.

Technical development determines to a large extent the enterprises' situation in the future. To ensure that the central technical development fund is used as effectively as possible, a part of it will be made available to enterprises under the same conditions as are set by the banks. Thus only the enterprises that can meet these conditions will be able to request resources from the central technical development fund.

The changes outlined above will be effective already as of the beginning of next year. But this does not mean that economic management's work to channel the flow of developmental resources in accordance with the efficiency of their use is all done. It will be necessary to monitor the experience with the measures now introduced, and the flow of resources that improves the economy's ability to generate income must be enhanced also by perfecting the methods of management.

1014

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## STEPS TO MODERNIZE ENTERPRISE MANAGEMENT

Budapest FIGYELO in Hungarian 2 December 82 pp 1, 2

[Article by Janos Bokor: "The Modernization of Enterprise Management and Leadership"]

[Text] In recent years various measures have been passed to increase the independence of enterprises and domestic and foreign market adjustability, to improve the organizational system of the economy, and to reduce the operative intervention of supervisory organs in the management of enterprises. As a continuation of this, the government has passed new measures! With this the turn came for the development of the operation of enterprise Supervisory Committees, an increase in the jurisdiction of the enterprise management committees, and the modernization of the practice of selecting higher leadership enterprise workers.

### A Greater Sphere of Authority for Supervisory Committees

Supervisory Committees (FB) have been operating since the introduction of the reform in some of the enterprises and trusts. Their task is to analyze and evaluate the management of the enterprises and trusts. Their task is to analyze and evaluate the management of the enterprises for the supervisory organ or the enterprise leadership. According to experience, their activity is in general profitable, although it may also be said that the level of their work is not even, depending on the composition of the FB's, the professional training of the members, and moreover how much time the members of the committee devote to this work. The renovation of the committee work, the increase in their tasks and sphere of authority has become a timely matter and is suitable for that direction of development which aims at making the management more modern and at reducing the direct economic management tasks of the supervisory organs.

The sphere of FB authority will expand in the future in two directions. On one hand, they will take over from the supervisory organs the tasks of the so-called comprehensive, complex supervisory control; and on the other hand, relying on this they will express views and make suggestions in questions basically influencing the future management of the enterprise. Such questions are the following: The medium-term plan concept of the enterprise, modification of its sphere of activity and organization, and the development of the basic

principles of the management, decision making and incentive system within the enterprise. The FB's will evaluate the enterprise managerial work and with their views they will help in the selection of new directors. (By giving opinions on applications, making suggestions on the professional requirements that may be prescribed, and so forth.)

The leadership of the founding organ constitutes the FB members from its own apparatus, and from the working members of the functionally managing organs, money institutes, and scientific and professional organizations. The appropriate sub-branch trade union also participates in the work of the committee. Since the FB is a body of the founding organ, and it performs certain of its functions, a worker or manager of the given enterprise cannot be a member of the committee.

The question was raised during the preliminary professional and social debates whether the FB would be capable of performing these tasks. There were concerns particularly in regard to control work. This indicates that the FB members must be chosen with great circumspection. It is important that an expert in control work should be given a place on the committee. A great deal depends on the chairman of the committee, who organizes and guides the work and maintains ties with the supervisory organ.

In order for the new-type FB's to fulfill their tasks of increased responsibility, it is essential that the employers provide the members with adequate time and take this into account in determining the tasks in their job assignments.

In the preliminary discussions there were suggestions that in certain questions the FB should be invested with rights over the managers, approve developments, and so forth. These suggestions would have invested the FB's with such property licenses as would have limited the directors' sphere of authority or meant the taking over of more functions from the supervisory organ. Finally, the attitude was taken that such a step would not be timely at present. In addition, it would also contradict the functions exercised by the FB's, because if the FB performs supervisory control it would be forced after the fact to judge its own decisions, which would make the objectivity of the control questionable.

#### Management Committees

The institution of management committees is another area where it was time for modernization. The enterprise law that became valid in 1977 prescribes that management committees must be organized at the trusts and invested with the given decisionmaking sphere of authority. But the establishment of such management committees hardly came about. The 1981 modification of the enterprise law provided that management committees could be established not only at trusts but also at enterprises if called for by the charter and if in definite questions the management committees can be invested with a decisionmaking sphere of authority.

The modernization of the institution of management committees serves the goal of institutionally placing on collective bases decisions in questions of a strategic nature defining enterprise management. These include approval of long-term and medium-term enterprise plans, laying out of functional areas,

determining of the directions of development, shaping and operation of the management and incentive system, the creation of new organizations, the establishment of organizational and operational regulations, and so forth. In addition it creates an institutional forum in the trust for interest coordination within the enterprise, surfacing the efforts of the individual organizational units.

The management committees must be organized in such a way that in addition to the enterprise leaders and their deputies positions will also be provided for the leaders of the separate organizational units. In addition, the participation must be assured of two specialists working in areas that influence the perspectives of the enterprise, as well as worker representation.

During the preparatory work there was discussion whether the investment of the management committees would limit the responsibility of the director. But up to now, too, a good enterprise director made his decisions in basic questions by relying on his leading colleagues. Where this was not the case, problems arose sooner or later because lack of leadership in a unit makes execution more difficult. In the final analysis the new regulation institutionally strengthens the collective nature of enterprise leadership and does not weaken the responsibility of the director.

Opinions were expressed that the members of the management committee, as enterprise workers, were dependent by work regulation on the director, and therefore a clash of view could not be expected. Dependence by work regulation does in fact exist. But it must be assumed that the openness of the discussions, the documentation of decisions and contrary opinions, and the control of the social organs is capable of countering possible excesses. A good leader knows how to assure comradely cooperation within the management committee.

It is particularly important to stress the role of the management committees within the enterprise in working out and operating the management and incentive system. It can realistically be expected that where a management committee is operating the distribution of means will be made on basis of an internal incentive order; leveling in the profit-sharing funds, wages, and development means will be eliminated or at least reduced and within the trust also the incentive relations will be better realized and their mobilization strength better expressed.

#### The Selection of Leaders

The third group of problems with which the new regulations deal is the selection and employment system for enterprise directors and their deputies. In the future it will be the director and not the supervisory organ that shall exercise employer rights over the deputy directors. He will appoint and release deputy directors, set their salaries, awards, premiums, and so forth, naturally on basis of valid work-right rules. This will release the supervisory organs from tasks which the enterprise director with the help of the social organs can do better and more objectively. Up to now the general practice was that the director made recommendations for his deputies, and these in most cases were approved by the supervisory organ. With this the role and responsibility

of the director will be strengthened in the selection of his colleagues, and this may improve harmony and unity in the enterprise leadership. It must be emphasized that although the deputies in the future cannot be regarded as higher leadership workers, this does not mean a material or moral disadvantage for them.

A more objective way of selecting leaders, the broadening of recruitment sources, and the restraining of subjectivism justify broader use of the application method. This is not contrary to the planning for cadre recruitment, and in fact supplements it very well. On one hand, it expands the sources of recruitment, and on the other hand it controls cadre plans. Naturally, in this case as well the sphere of influence of the social organs is realized.

A new feature of the regulation is that it provides a way also for appointing leaders for a limited period of time. The purpose of this is to promote adjustment to changing requirements and help cadre changes during the period. Limited appointments, of course, can be extended, even a number of times. At the same time, with the participation of the social organs and the supervisory committees it will systematize the evaluation of the leaders' work.

The question was raised during the discussions what kind of procedure should be followed if the appointment is not extended when the time set has expired. The statutory provision prescribes that in such a case attention must be given to the continuing employment of the leader; but the social judgment must also be changed, something which cannot be done by way of statutory provision.

At the same time it is a new feature in the employment of leaders that at the time of appointment longer-term economic requirements may be stipulated. These may be drafted in terms of the economic situation of the enterprise and its future tasks. They may be linked, for example, to development, they may require the building up of new market relations, the development of the product structure, and so forth. But requirements cannot be prescribed which would violate enterprise independence (for example, concrete production instructions or investment).

The new statutory provisions create the necessary legal conditions for modernizing enterprise management and leadership. Their effective implementation depends on whether the supervisory organs will use appropriately the possibilities offered by the new rules.

6691

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SITUATION, PERFORMANCE OF CONSTRUCTION INDUSTRY VIEWED

Budapest FIGYELO in Hungarian No 46, 18 Nov 82 p 20

[Editorial: "Preliminary Evaluation of the Construction Industry"]

[Text] It is doubtless that the neatness of the construction site after the building is finished greatly influences the image of the construction industry; but it would be a mistake to judge the performance of the entire branch on the basis of this one measure. However, keeping in mind our domestic industrial management practices, it is to be feared that the observations of the branch minister will become a sales campaign, and those concerned will pay more attention to the mentioned face-lift than to labor management, reducing materials and energy costs, increasing organization, and better use of tools, in all increasing efficiency.

This year's action committee conference of the construction affairs ministry took place over a month later than usual. This is not a formal observation either, since it indicates that the regulations for 1983 were not drafted in time, and it can be assumed that next year's industrial plans will be hastily prepared. In addition, 1983 does not promise to be an easy year.

It is difficult to analyze the performance of the construction industry this year. Although the output of the construction branch has continued to decrease for years (coinciding with the goals of the national economic plan), at the same time, the industry is fulfilling its undertakings and contracts in quantity. (The planned goals were also reached in large investments and housing construction.) Productivity has grown 2.5 percent this year in the construction industry, but meanwhile use of tools has decreased, and of the nearly 170 thousand enterprises belonging to the industrial ministry, 15 thousand left the branch.

The quantity and quality of finished work and the effect of regulations together determine profitability. This year, industrial profits will amount to 8.5 million more forints than planned. The greatest problem is that the spread will be fairly large: 12 enterprises of the Ministry of Construction and Urban Development and 6-7 industrial cooperatives will show a net loss this year. Let an opinion be heard in contrast to common belief: the sources of our problems must be found in enterprise and management work, rather than in regulations. Especially if we analyze individual cases, it does not become

adequately clear which enterprises are low on efficiency and what factors are to blame for our growing losses. Nonetheless, many enterprises of the ministry have shown that despite given wage regulations and interest charges, profitable management and increased productivity are still possible. Many people tend to throw their hands up at construction enterprises, especially the housing construction firms of the capital. Yet many of the regional enterprises have proven that profit is possible even in housing construction.

Naturally, the Ministry of Construction and Urban Development initiated the wage increases, although it was stated at the action committee conference that "We are not in favor of unlimited wage increases." Yet we must consider if it is wise to exert a new inflationary influence on our economy through such a channel. This consideration is even more important since even the minister politely upbraided the enterprise directors for holding back management resources. Marketing suggests that slower years in the construction industry can be overcome by reducing materials waste, shirking in the workplace, and idle time for vehicles, machines and equipment. Take BULAV, for example, which has been on the list of ailing industries for years; when its directorship was replaced, a dozen possibilities for powerfully reducing its losses were found.

In the construction industry this year, nearly 560 small organizations were formed with the participation of about 8 million people. Considering the technology and work methods of the construction industry, this number is surprisingly small. Even earlier in the second economy, a large proportion of breadwinners participated in construction work; in addition, with the growing number of people building their own houses, this proportion is not expected to drop. It would be comforting to many if the proportion of small enterprises would grow, within an institutionalized framework, in this sphere and in other, smaller investment and restoration projects also.

In the coming year, construction work will further decrease and another 15-20 thousand workers are expected to leave the trade. The strengthening of regulations emphasizes the need for national economic work. As the minister stated, if nothing else this "sounds the alarm" for economic directors; it is time for the enterprises to devote more attention to the work of "businessmen." These quotation marks are not accidental, since at enterprises, if the commercial department exists at all, it does not exert any significant influence on the work of the enterprise in its present situation; instead of working out market strategies, the department is limited to documenting. In the long run, we must accept the idea that the construction industry also produces for the marketplace, and in time customers will choose among contractors, with or without competitive bidding. It is sad, but nevertheless still justified, to hear that at one otherwise successful enterprise, business strategy consists only of meeting deadlines and completing quality work.

Another, though less central, observation shows what anomalies are to be found in the work of the branch: namely, contractors are still complaining about the unplanned nature of their work, while planning institutions complain

about constant decreases in work possibilities, and indeed they must count on 8-14 percent reductions in 1983.

At the action committee meeting of the Ministry of Construction and Urban Development, the participant could nevertheless still decide that the construction trade will last for a long time on the amassed reserves of the past decades.

9890

CSO: 2500/52

AVERAGE YEAR FOR AGRICULTURE ACCORDING TO MINISTER

Budapest MAGYAR NEMZET in Hungarian 23 Nov 82 p 7

[Interview with Deputy Agriculture Minister Gabor Magyar by Nandor Keresztenyi:  
"We Are Ending an Average Year"]

[Text] There has never been such an ideally perfect year in the history of agriculture, that it could be said: for every plant, the weather--that certain factor, which has been announced by some is disregardable, but in reality, even today, is the most important one--was favorable. Nineteen hundred eighty-two was like this too, since the drought came upon the wheat in May, and at the beginning of the fall harvest, floods ravaged our western regions. These were just two of the setbacks.

In general and on the whole this year cannot in the least be called bad, it appears by the way of introduction from the words of Dr Gabor Magyar, deputy minister of agriculture and food. He is in his first year in this capacity, but in his previous, about a decade-long, employment he also had plenty of opportunities to evaluate the development of our food economy. He served his practical experience as director of the Corn and Industrial Crop Producing Corporation [KITE]. KITE is already active in 14 of our counties--but his honorary professorship is proof that he is also at home in theoretical fields.

"If we examine only one agricultural year," he starts the chat, "It is more practical to start with the previous fall instead of January, at least in the area of crop cultivation. Really, the grain harvest is established then; not only wheat planted in the fall, but because it is not all the same indeed, just how much of the fields could be plowed for the corn and other plants to be sown in the spring. Well, in the autumn of 1981 the weather proved to be kind. So much so, that the farms were able not only to sow all the wheat on time, but could also plow up all their fields. It is possible that the layman thinks this goes without saying, and so this important factor slipped by the public attention, therefore it does not hurt to emphasize it here: looking back for many, many years, this is the first time it has happened, so we can talk about a plowing record! Which, in a good measure, contributed to the fact, that although the drought in May really caused much harm to the winter crops, it did help the corn. Thus, this plant nearly makes up for the 400,000 tons by which the cereals fell behind the allocation. The exceptionally favorable autumn, frostless to the end of October, really did its part;

certainly, some crops caused marketability troubles with their abundance. But, in any case, an unquestionable record must be mentioned here: 3,750 kg of rice was grown per hectare, which would have been, at most, 3,000 kg on the average without the ideal fall.

[Question] To my knowledge, much technical effort also had a part in the new boom of domestic rice production, which was already given up as a failure by many. And KITE was the very crop production system which employed a Japanese rice specialist, purchased laser-guided machinery from America, and so on....

[Answer] But all these would have been worth very little were not for the managers of farmers' cooperatives sometimes willing to make sacrifices, and for other lovers of rice, in other words, if the often talked about acceptance was not there. And when I say rice, we must really think of KITE synonymously, because the rice production system of Karcag closed down long ago, and that of Szarvas merged into the Na'dudvar system recently.

[Question] In the past year or two, it has been customary to talk about the cereal and meat programs. Where does this intertwining, not to a small extent export-dependent, export-build program stand, the second subchapter of which, the meat, is certainly causing lots of worry to our farms....

[Answer] Let me start with animal husbandry. In the case of two animal species, really, there have appeared sizeable quandaries. We did have sheep-marketing worries, but we succeeded not only in saving the stock, but also in increasing it, so we do have the 1983 mutton product. Marketing difficulties, low prices are what justify keeping only so much poultry as covers demand, whether we are talking of domestic or foreign demand. On the other hand, there is significant interest in pigbreeding, both at large enterprises and by the small producers. However, we are not satisfied with the beef cattle stock, although incentives have begun to appear and are improving. As for the dairy cow stock, the dwindling that ensued in the household was not counterbalanced by the stock of large enterprises, although with milk-oriented specialization the amount of milk increased. Of course, if we are looking about in the longer range, we have no cause for complaints: while at the end of the sixties it was 1.2 million tons, now the statistics speak of 2.1 million tons of beef cattle; this quantity means the live weight of the animals, not the meat.

[Question] We must have similar statistics on cereals also....

[Answer] While at the end of the sixties we were importing cereals, for example, for bread from the United States, we succeeded in capturing, or rather, recapturing our former exporting position. In numbers this means, that compared to the 8-9 million tons of cereal harvest annually at the low point, the last years yielded around 14 million tons of product. Intensive cereal-development program was attained on 134,000 hectares this year; next year we will draw in another 156,000 hectares into this area, buying machines from abroad for this purpose. This will make it possible to replace wornout combines and tractors with those with a higher technical level. By means of machine imports, we contributed to cooperative farm-machine manufacturing,

mainly at the Raba Rail Car and Machine Works, but also at several farm implement companies. Today, the sowing and cultivating implements and some of the hay harvesters are made by Hungarian industry. I don't want to say with this, that agriculture's material-technical supply, the established nature of its development is all in the best order, on the contrary; just the simple enumeration of the relevant worries and things to do could be a separate, large and uncoverable topic....

[Question] Recently, on the Rural Evenings TV series, we were able to see a film in which Csaba Balogh, your successor in the director's chair of KITE, made the statement, among other things, that they were introducing new services next year, are looking for ways and means of renewal. On the other hand, a couple of years ago it came up in our agricultural circles that some crop cultivation or animal husbandry production system managers were not able to satisfy demand, as they were saying: they were devaluated....[sic]

[Answer] There is no contradiction here! First of all, what does the concept "production system" itself mean? In one of my speeches, I attempted a perhaps complicated-seeming definition, but all of its elements could not even be listed. Well, I hope the reader will not consider it immodesty, if I quote this passage: it means the kind of integration, where definite sectors of agricultural enterprises undertake the economic development of certain crop cultivating, or animal husbandry branches in such a way that they always blend the latest biological, technical, and organizational scientific results into homogeneous technology and organize their utilization parallel with intellectual and material services. Babolna 12 and Nadudvar 10 years ago started out on their system managerial careers, and together with two more of their partners--the Agricultural Combine of Baja, and the one directed by the State Farm of Szekszard--they did the most. Right now, nationwide, 81 percent of the cornfields, 74 percent of wheat, 82 percent of sunflowers, 74 percent of sugarbeets belong to 21 crop-production systems, which keep more than half of the arable land, 2.5 million hectares, under their influence. But it cannot be denied that speaking of devaluation is not without basis, the various foreign and domestic challenges can only be met by ceaseless renewal and holding of the ground. So, Csaba Balogh gave evidence of such readiness in that TV speech.

[Question] But the MEM [Ministry of Agriculture and Food] also employs stern means: I know from the trade press that recently the license of a few production systems was revoked....

[Answer] Such revisions are due every 3 years, and it is true, the last time, among others, the production systems for the Solanum potato, Szeghalom's alfalfa, Csany's tomato, Ullo's root vegetable, and Kiskoros and Kecskemet-Szikra's grapes and wine did not meet the qualification standards. These ceased, while the onion-production system of Soroksar itself asked to surrender its license. Again others choose the route of mergers, like the cattle-production system of Kaposvar, which joined a collective enterprise. The requirements of today are very strict, whether we are looking at the farm's financial margin, or the quality demands of the export market.

[Question] Please, forgive me for referring to the TV again, but in the last episode of The Venture, Minister Jeno Vancsa made this statement at the Munich Food Fair: We export 25 percent of the products of our food economy, which is in harmony with our total exports in that its ratio there is also one quarter....

[Answer] This happened by chance, but when we speak of agricultural exports, it is important to watch the whole process--here in the cabinet, as well as on the farms, where it is necessary to expand the organization along the full vertical. It is not necessary to give independent export rights to everyone; first, the sellers and producers should join in an association, creating common interest. I know this is only simple to say, but I don't see another way for the bettering of the fame of Hungarian products and victuals.

9918

CSO: 2500/60

## LONG-RANGE DEVELOPMENT OF POWER INDUSTRY OUTLINED

Warsaw WIADOMOSCI ELEKTROTECHNICZNE in Polish No 8, Aug 82 pp 231-237

[Article by Ryszard Nodzynski, deputy director of the Planning Department in the Ministry of Mining and Energy: "Development Directions of the Polish Electric Power Industry to the Year 2000"]

[Text] In size of electric energy production (115 billion kW.h [kilowatt-hours] in 1981), Poland holds 6th place in Europe (after the USSR, the FRG, Great Britain, France, and Italy) and 11th place in the world. In 1981 net electric energy consumption per one inhabitant amounted to 2,650 kW.h, which puts our country in 19th place in Europe.

During 1976-1981 there were problems in meeting the country's needs for power and electric energy. This year [1981] the difficulties have eased due to lower consumer demand and higher availability of power industry equipment.

One of the basic conditions for overcoming the present economic crisis is assurance of necessary deliveries of electric energy. The development of the electric power industry should outpace the country's socioeconomic development. This will require expansion of the power industry along with the fuels base and production-overhaul facilities and, simultaneously, action aimed at making the consumption of fuels and energy both efficient and economical.

## Current State of the Power Industry

The basic data on the production potential of the Polish power industry (as of 31 December 1981) are as follows:

- number of thermal electric power plants, 58;
- number of hydroelectric power plants, 117;
- total generating capacity of power plants, 25,523 MW [megawatts], including industrial power plants, 3,021 MW; public-utility power plants, 22,502 MW (including thermal, 21,175 MW and hydro, 1,327 MW);
- capacity of the largest power plant: thermal, 2,600 MW, hydro, 500 MW; number of units of 120 to 130 MW capacity, 24; 200 MW capacity, 59; 500 MW capacity, 2;



--total length of electric energy network, 581,100 km, including high-voltage, 35,100 km, medium-voltage, 229,900 km, low-voltage, 316,100 km,

In 1981 in Poland 114.99 billion kW·h (gross) was generated, including 8.53 billion kW·h in industrial power plants, 106.46 billion kW·h in public-utility power plants (in thermal, 103.45 billion kW·h and in hydroelectric, 3.01 billion kW·h). Electric energy production in 1981 was lower by approximately 7 billion kW·h from the amount obtained in 1980 (121.9 billion kW·h).

The percentage structure of electric energy production in public-utility power plants (according to type of source of primary energy) was as follows:

--in thermal electric power plants, 97.2 percent (using hard coal, 74.2 percent, brown coal, 21.3 percent, other fuels, 1.7 percent),  
--in hydroelectric power plants, 2.8 percent.

The average monthly power demand in Poland's electric power system during the evening peak on working days (excluding Saturdays) in December 1981, amounted to 18,508 MW, and the maximum demand was 19,014 MW.

The average demand in December 1981 was lower by approximately 900 MW than in 1980, and the maximum demand by about 1,800 MW (in 1980 this demand was, respectively, 19,414 and 20,826 MW).

The percentage structure of electric energy consumption by the basic consumer groups was as follows in 1981:

--industrial consumers, 66.1 percent,  
--railroad electric traction, 4 percent,  
--residential-municipal consumers, 29.9 percent (including households, 12.8 percent, and farms, 6 percent).

Total consumption (production plus import minus export) of electric energy per 1 inhabitant in the country in 1981 amounted to 3,202 kW·h, and net consumption was 2,650 kW·h.

There are central heating systems now in 82 cities, in 29 of which the thermal energy consumers are supplied from public-utility energy sources. Thermal capacity of electric-power and heat-generating plants and public-utility heat generating plants totals 20,289 MW<sub>t</sub> (1 MW<sub>t</sub> = 1,163 cal/h [calories per hour], including 18,134 MW<sub>t</sub> in electric-power and heat-generating plants and 2,155 MW<sub>t</sub> in heat-generating plants. Thermal energy production in the public-utility power industry in 1981 amounted to 200.7 PJ [quadrillion joules] (1 PJ = 10<sup>15</sup> J [joules] = 4.1868 · 10<sup>15</sup> cal), of which 119.0 PJ was in combination with electric energy production, and 81.7 PJ not in combination (directly from boilers and reducers).

Thermal energy in the public-utility power industry is generated mainly from hard coal (approximately 93 percent of total production).

In 1982 electric energy production according to the Central Socioeconomic Plan should amount to 116 billion kW·h with the possibility that this can be increased to 118 billion kW·h. Thermal energy production should amount to 230 PJ.

Since February 1982 the situation in the electric power industry is good, mainly due to lower demand for power from industry. The availability of power industry equipment has also improved. Deliveries of hard and brown coal to power plants are also going well.

#### Demand for Power and Electric Energy

Average annual increases in total consumption of electric energy in the country (i.e., production plus or minus balance of exchange with foreign countries) were as follows:

- 1950...1955, 13.6 percent;
- 1955...1960, 10.7 percent;
- 1960...1965, 7.9 percent;
- 1965...1970, 8.3 percent;
- 1970...1975, 8.4 percent;
- 1975...1980, 4.7 percent.

In 1981, as a result of the economic difficulties occurring in the country, total consumption of electric energy dropped 5.5 percent.

No forecasting of growth in demand for electric energy by domestic consumers during the years 1982 to 2000 on the basis of past historical trends is possible because of the large reduction in the rate of socioeconomic development in the country, and furthermore, structural changes in the national economy may take place. Therefore, the country's requirements for power and electric energy have been determined envisaging:

--stabilization in the national economy enabling the country to gradually overcome its economic difficulties and achieve during 1986-1988 a level of industrial production equivalent to that of the 1979-1980 pre-crisis period;

--changes in the structure of industrial production aimed at reducing materials- and energy-intensiveness of the economy and conversions which would help agriculture and the food economy and market production;

--retention of the now-appearing increases in electric energy consumption by the railroad traction, which is the result of continued electrification and more haulages by electric traction;

--a further growth in demand from residential-municipal consumers, particularly households and farms. Increased farm and animal-husbandry production is closely tied to growth in electric energy consumption; maintenance of this growth rate in demand for electric energy by this group of consumers will also be affected by the shortage of liquid and gaseous fuels;

--technical, economic and administrative measures aimed at improving the efficiency and economy in consumption of electric energy.

Table 1. Electric Energy Production (in billion kW·h) During 1980-2000

(1) \ (2) Rok	1980	1981	1982	1985	1990	2000
Variant						
I	121,9	150	118,0	133	170	259
II	121,9	150	117,5	129	160	244
III	121,9	150	116,0	125	150	226

Key:

1. Variant
2. Year

Table 2. Maximum Size of Power Demand (in MW) During 1980-2000

(1) \ (2) Rok	1980	1981	1982	1985	1990	2000
Variant						
I	20826	19014	20600	23700	30100	45700
II	20826	19014	20300	22700	28600	43100
III	20826	19014	19900	21600	26700	40000

Key:

1. Variant
2. Year

Taking the above assumptions into account, as well as the various effects of internal and external determinants (mainly progress in normalization, economic cooperation with other countries, and results of economic reform) variants of a planned level of electric energy production were defined (Table 1).

In preparing the forecasts, the electric energy export and import balance (ultimately: plus or minus 4 billion kW·h) was taken into account.

At the same time as the size of electric energy production was forecasted, the maximum and average December (on work days, excluding Saturdays) demand for power in the electric power industry system was determined (Table 2).

One notes that variants I and II are more closely correlated with the envisaged surmounting of the economic crisis and the future development of the national economy. Variant III, however, conforms to a longer period of national economic stagnation.

Figures 1 and 2 show total electric energy consumption and maximum power demand in the electric power system during 1955-2000. Figure 3 shows the forecasted structure of electric energy consumption during 1980-2000.

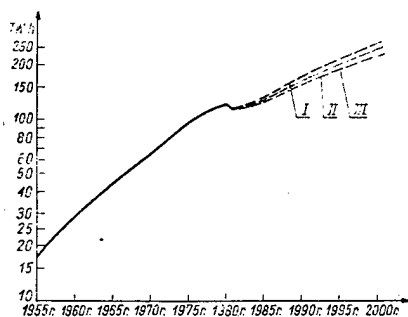


Figure 1. Total electric energy consumption (I, II, III - variants of total demand during 1982-2000)

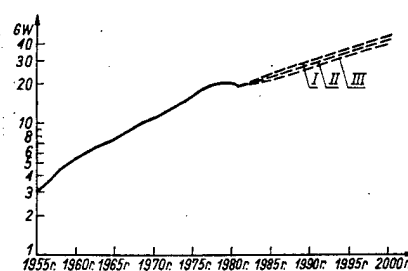


Figure 2. Maximum power demand in the electric power industry system (I, II, III - variants of demand during 1982-2000)

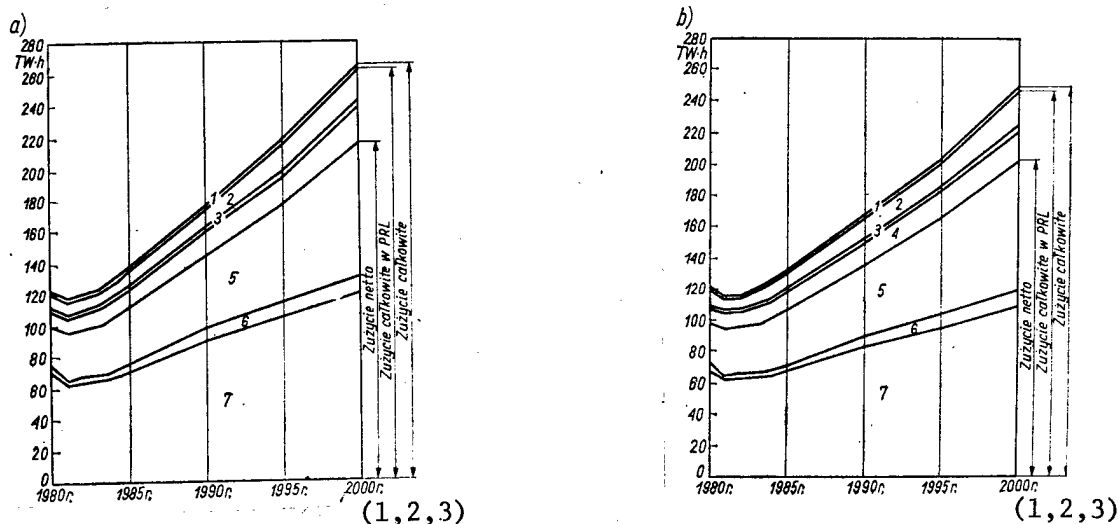


Figure 3. Structure of electric energy consumption: a) variant I, b) variant II  
 1 - sales abroad; 2 - losses in network; 3 - pumping; 4 - domestic consumption for production of electric energy; 5 - residential-municipal consumers; 6 - Polish State Railways traction; 7 - industry.

Key:

1. Net consumption      2. Total consumption in Poland      3. Total consumption

#### New Power-Generating Installation Program

The following power plants are to be started up during 1982-1990:

- on hard coal: the Polaniec power plant (8 X 200 MW and possible expansion by an additional 4 X 200 MW); the Opole power plant (6 X 360 MW) and an electric-power and heat-generating plant (approx. 2,300 MW);
- on brown coal: the Belchatow power plant (12 X 360 MW) and possibly the Zatonie power plant (2 X 360 MW);
- the Zarnowiec nuclear power plant (2 X 440 MW);
- the hydroelectric power plant Zarnowiec (4 X 170 MW), and Czorsztyn (2 X 46 MW);

It is anticipated that during 1982-1990 a total of 12,000-14,000 MW will be put into operation from investments.

In the following years (1991-2000), approximately 21,000-25,000 MW should be put into operation from investments.

The investment program, as it relates to construction of large, unitary thermal electric power plants is dependent to a large degree on the possibility of a further expansion of the fuels base for the power industry, particularly new brown coal mines (Szczercow, Legnica, Gubin-Cybinka-Mosty, Trzcianka) and the nuclear power industry. In hard-coal-fired power plants, consideration is being given to building a power plant in the region of the now-forming Lublin Coal Basin and possibly a power plant fired by poorer grades of coal coming from the Jaworzno-Mikolow region. Expanded and new electric-power and heat-generating plants will also be fired by hard coal.

The construction of hydroelectric power plants is also anticipated. These will be further stages on the lower section of the Wisla [River] (Ciechocinek, Wyszogrod, Opalenie) and on Upper Wisla and its tributaries. The small hydroelectric power industry should also expand (restoration and construction of small power plants on watercourses throughout the entire country). Furthermore, pumped-storage hydropower plants will be built, such as, for example, the Mloty and Niewistka power plants.

The locations of the thermal electric power plants (conventional and nuclear) are shown on the front cover of this issue of WIADOMOSCI ELEKTROTECHNICZNE [see below].

The size and parameters of the power units used in Polish conventional thermal electric power plants are given in Table 3.

During 1991-2000 600-MW-capacity units are also supposed to be built.

Table 3. Power Units Used in Polish Conventional Thermal Electric Power Plants

(1)	Parametry eksploatacyjne	(2) Moc bloku energetycznego			
		120 MW	200 MW	360 MW	500 MW
(3)	Ciśnienie pary przed turbiną, w MPa	13,5/3,0	13,0/2,7	17,5/4,4	16,5/3,75
(4)	Temperatura pary, w °C	535/535	535/535	535/535	535/535
(5)	Jednostkowe zużycie paliwa:				
(6)	— na węglu kamiennym w kJ/kW·h	10 400	10 380	9 760	11 300
(7)	— na węglu brunatnym, w kJ/kW·h	11 750	10,490	9 865	

Key:

- |   |   |
|---|---|
| 1. Operating parameters                                   | 5. Specific fuel consumption                              |
| 2. Power unit rating                                      | 6. On hard coal in kJ/kW·h [kilo-joule per kilowatt-hour] |
| 3. Steam pressure at turbine inlet, in MPa [mega-pascals] | 7. On brown coal in kJ/kW·h                               |
| 4. Steam temperature, in deg C                            |   |

#### Development of Centralized Heating-Plant Systems

In all of the larger towns and urban centers thermal energy for household use is supplied to housing from centralized sources of heat, i.e., municipal and community power plants, electric-power and heat-generating plants, and public-utility and industrial heat-generating plants. Industrial consumers are also supplied from these sources (hot water and steam for production flowline).

The public-utility power industry has centralized heat sources in 29 of the larger towns and urban centers. As a rule, these sources are constructed as electric-power and heat-generating plants with combined generation of electric and thermal energy. In some cases, heat-generating plants are built initially and then when

demand for thermal energy increases to a justified level these are expanded into electric-power and heat-generating plants. Old steam-operated electric power plants are also reconstructed into electric-power and heat-generating plants where possible.

Based on the presently envisaged housing construction programs it is estimated that the necessary increase in thermal power of centralized sources in the power industry during 1982-1985 should amount to at least 7,160 MW<sub>t</sub> (6,160 Gcal/h [giga-calories per hour] and electric power, 900-1,000 MW. However, during the following five-year periods these increases should amount to approximately 9,000-10,000 MW<sub>t</sub> (7,740-8,600 Gcal/h) and approximately 1,300-1,500 MW.

Anticipated amounts of thermal power production in electric-power and heat-generating plants and public-utility heat-generating plants are given in Table 4.

Table 4. Planned Production of Thermal Energy in Electric-Power and Heat-Generating Plants and Public-Utility Heat-Generating Plants

(1) \ (2) Lata	1980	1985	1990	2000
Jednostka energii				
PJ (1PJ = 10 <sup>11</sup> J)	216,8	280	360	600
Pcal (1Pcal = 10 <sup>11</sup> dal)	51,8	67	86	143

Key:

1. Unit of energy
2. Years

The development of centralized heating-plant systems is one of the most effective ways of generating thermal and electric power.

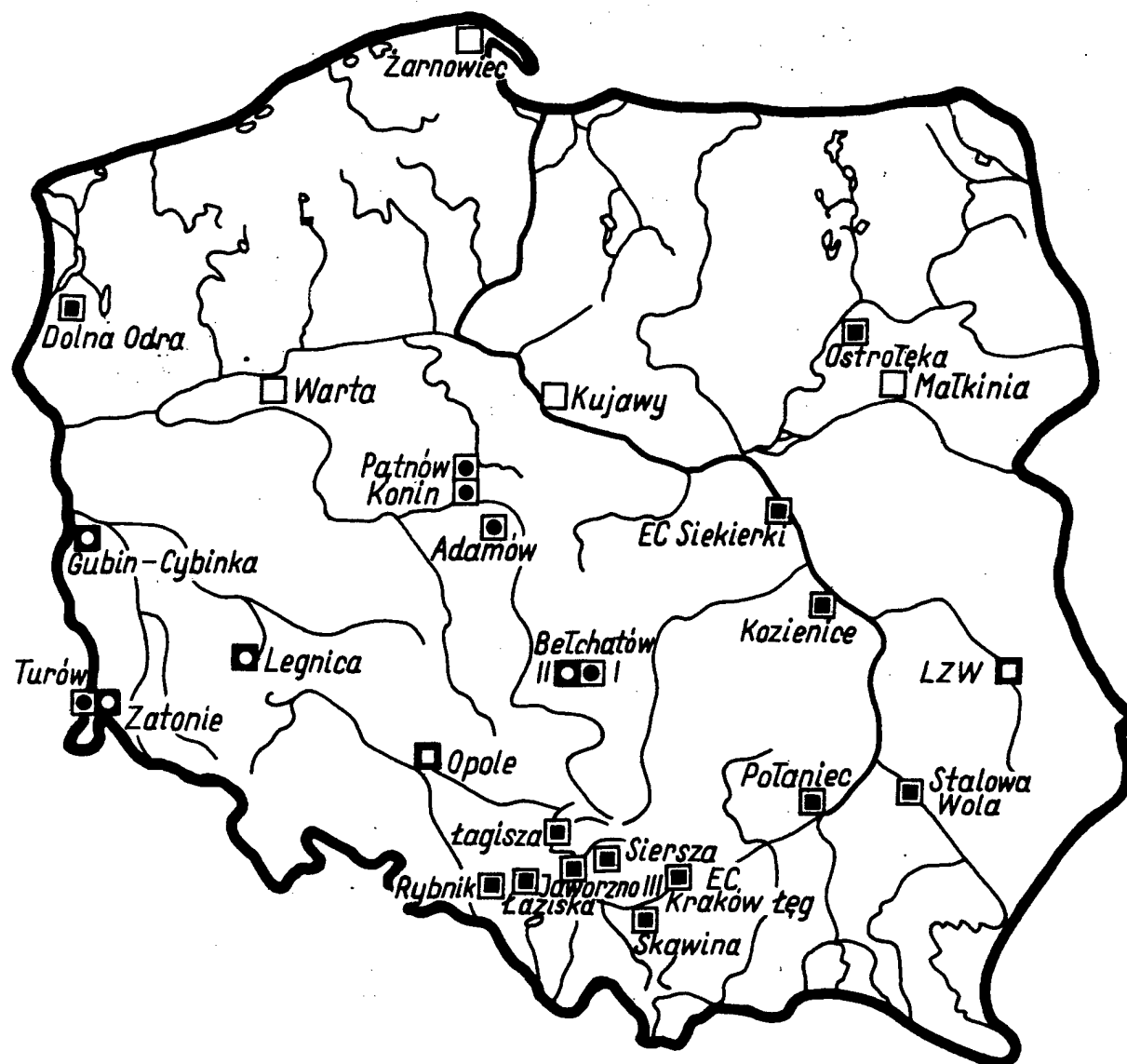
In the electric-power and heat-generating plants now being built, 30-, 50-, and 100-MW capacity power units are being used, with steam-bleeding, or pressure-bleeding, turbines. The thermal power of these units, together with the water boilers, amounts to 128, 256, and 422 MW<sub>t</sub>, respectively. In the future, thermal units will be used with 180 MW electric power and 842 MW<sub>t</sub> thermal power (network water parameters: 150/70 deg C). The possibilities of using nuclear electric-power and heat-generating plants or heat-generating plants in future years are being considered.

#### Development of Electric Power Network

The electric energy transmission and distribution system constructed in the past was based mainly on 220 and 110 kV [kilo-volt] lines and stations. The construction of a 400 kV basic transmission system is now underway, which will permit electric energy to be brought out of the new, large electric power plants and transmitted to the receiving centers. A 750 kV line, 114 km long, will also be constructed from the Polish-USSR border to a 750/400 kV station in the Rzeszow region. This line will make for a better connection with the USSR Uniform Power System and will permit transmission of power and electric energy from the Khmel'nitskiy Nuclear Power Plant to Poland and a partial transit of this energy to the CSSR, the Hungarian People's Republic, and the GDR.

In order to deliver electric energy with sufficient reliability to the consumers, with the lowest possible network losses, a primary, 110 kV voltage, distribution

# Large Thermal Electric Power Plants in Poland in the Year 2000



## Existing power plants

- brown-coal-fired
- hard-coal-fired

## Projected power plants

- brown-coal-fired
- hard-coal-fired
- nuclear

network will be expanded. The SN [medium-voltage ?] networks (primarily 15...30 kV), along with transformers supplying power to the low-voltage networks, delivering energy directly to consumers, mainly housing construction and agriculture, also require large expansion.

The development of the electric power network has not kept pace either with the needs of the national economy or the development of energy sources. The adaptation of rural networks to the needs of modern agriculture (increased consumption of power and energy and improvement in the reliability of supplying power to the consumers), in particular, lags far behind. Construction of 400 and 750 kV lines requires larger amounts of heavy equipment and modern installations, apparatus and high-capacity transformers of suitable qualitative parameters.

Construction of the following electric power lines and stations during 1981-1985 is anticipated:

- 1,840 km of 400 kV lines and stations with a total 3,250 MV·A [mega-volts amperes] capacity, linked with power output from the electric power stations now being built;
- 114 km of 750 kV line from the border with the USSR to Rzeszow and a 2,220 MV·A station;
- approximately 400 km of 220 kV line and stations with a total 1,500 MV·A power, to carry power from the power plants and supply the urban-industrial centers;
- approximately 4,000 km of 110 kV lines and stations with a total power of approximately 10,000 MV·A, as a primary distribution network;
- approximately 14,500 km of medium- and low-voltage lines together with stations with a total power capacity of 5,000 MV·A to supply power primarily to housing construction and agriculture.

A detailed program for the development of networks during 1986-1990 is being prepared, as well as guidelines for development to the year 2000. Figures 4 and 5 show the electric power transmission networks system in 1985 and tentatively and ultimately in the year 2000.

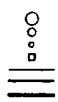
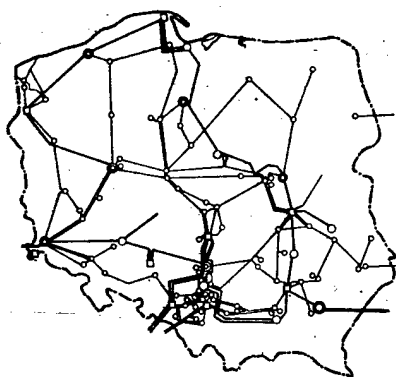
#### Directions in the Development of the Power Equipment and Machinery Industry

In the present organizational system, the Ministry of Mining and Energy administers a production-overhaul facility. The main producer of machinery and equipment for the power industry is the MEGAT Association of the Power Equipment and Machinery Industry, which is composed of, among others, the RAFAKO Raciborz Boiler Factory, the ZAMECH Mechanical Plants in Elblag and the DOLMEL Lower Silesian Electric Machinery Production Plants in Wroclaw.

The electric machinery industry produces the following power machines and equipment:

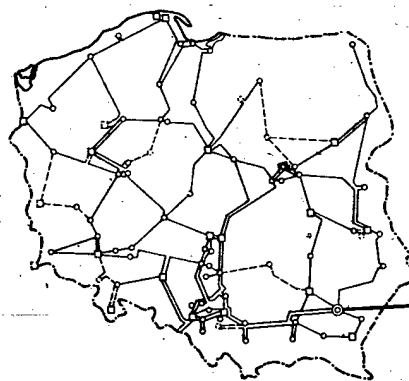
- boilers and boiler equipment;
- turbine units;
- electric turbo-machines;
- nuclear power equipment;
- converter and power-supply equipment;
- distribution apparatus and equipment;
- isotopic and automation apparatus;
- pole structures for electric networks;
- spare parts.





In descending order: 750 kV station, 400 kV station, 220 kv station; 220 kv, 400 kv, 750 kv lines.

Figure 4. 220, 400 and 750 kV network system in 1985.



In descending order: electric power plant, 750 kV station, 400 kv line, 750 kv line, 400 kv station.

Figure 5. 400 and 750 kV network system in the year 2000.

The industrial and organizational potential on hand facilitates a series of undertakings, beginning with the production of energy products and proceeding through delivery, assembly, startup, repairs and overhauls, modernization, and reconstruction.

Due to the licenses purchased and research and development and post-licensing work, the basic products of the power equipment and machines industry are relatively very up-to-date. This pertains especially to the turbine units (BBC, G. Fischer, of Switzerland, license), pulverized-fuel boilers (under license from Sulzer, Switzerland, and EVT, the FRG), transformers and high-powered motors.

At present, the ministry's electric machines industry is beginning to produce machines and equipment for the nuclear power industry on a large scale, including nuclear reactor control systems (e.g., systems of the SEJWAL and HINDUKUSZ type). Based on Polish scientific-research work, the production of Camac and Standard systems apparatus has been developed, directed at control by technological assemblies in electric power plants.

Approximately 20-25 percent of the electromachinery production is intended for export both to CEMA countries and the developing countries. A large part of this export are deliveries and construction of complete power facilities (e.g., the Prunerov power plant in the CSSR, and Yatagan power plant in Turkey). This export, as negotiations conducted with other countries indicate, may be increased.

The present production capacity of the electromachinery industry is not sufficient to fully satisfy the needs of the power industry and export. Therefore, the expansion of production capacity in some groups of machines and equipment is anticipated, both through investment measures and by transferring the production of some products to entities outside the Ministry of Mining and Power Industry whose profile of production and technical capabilities will permit the manufacture of the necessary power machines and equipment.

The Ministry of Mining and Energy has its own units for the construction of electric power plants, electric-power and heat-generating plants, and an electric power network. Electric power plants and electric-power and heat-generating plant construction is conducted by ENERGOBUDOWA Electric-Power Plant Construction Association, and network construction is by Associated Power Construction Plants ELBUD.

Development of the power industry requires expansion of power-plant and network construction potential (purchase of transport means and equipment, construction and expansion of steel structure plants, channels and cables, expansion of transportation-equipment and warehouse facilities) and at the same time applying advancements in the field of construction techniques and technology.

#### Fuels Base for the Power Industry

It is estimated that the country's socioeconomic development will increase the demand for primary fuels from the present 183 to approximately 260-280 million tons of standard fuel (calorific value, 29,308 kJ/kg) in the year 2000.

Investigation of the feasibility of obtaining primary fuels shows that to meet the country's requirements, development of a domestic base of power industry raw materials, an increase in crude oil and natural gas imports, and also development of nuclear energy (use of coproduction for deliveries of equipment and importation of uranium fuel), are indispensable. It is essential also that maximum use be made of hydropower, and solar, wind, and biomass energy, and that greater improvements be made in the consumption of fuels and energy.

The hard coal obtained as a result of an increase in mining must be allocated mainly for the requirements of thermal energy production for industry and centralized construction in the larger towns (heating-plant systems) and for dispersed construction in towns and villages (individual furnaces) as well as for export. Oil products and natural gas must satisfy the needs of transportation and motorization, the chemical and metallurgical industries, agriculture, the food industry, and residential-municipal consumers. But the increase in demand for fuel to produce electric energy must be met mainly by using brown coal, and in the future, also with nuclear fuel.

From the standpoint of the national fuels-energy balance, development of brown-coal mining and nuclear energy is an economic necessity and the only means for meeting the country's requirements for fuel to produce electric energy.

The percentage structure of electric energy production in public-utility power plants, by types of fuels (for variant I production), is shown in Table 5.

Almost all of the increase in thermal energy production in electric-power and heat-generating plants and public-utility heat-generating plants is to be obtained in power plants fired by hard coal (they now supply approximately 93 percent of the thermal energy produced). The use of nuclear heat-generating and electric-power and heat-generating plants in the future is also being considered. Figure 6 shows the structure of electric energy production in public-utility power plants by types of fuel (for two variants of levels of production).

Table 5. Structure of Electric Energy Production From Various Fuels (percentage)

(1) Lata		1980	1985	1990	2000
(2)	Rodzaj paliwa				
(3)	Węgiel kamienny	73,8	62,6	57,3	39,3
(4)	Węgiel brunatny	21,1	32,2	36,7	34,8
(5)	Paliwo jądrowe	—	—	1,3	20,5
(6)	Inne paliwa	2,2	1,9	1,9	1,5
(7)	Elektrownie wodne	2,9	3,2	2,8	3,9

Key:

- |                 |                               |
|-----------------|-------------------------------|
| 1. Years        | 5. Nuclear fuel               |
| 2. Type of fuel | 6. Other fuels                |
| 3. Hard coal    | 7. Hydroelectric power plants |
| 4. Brown coal   |                               |

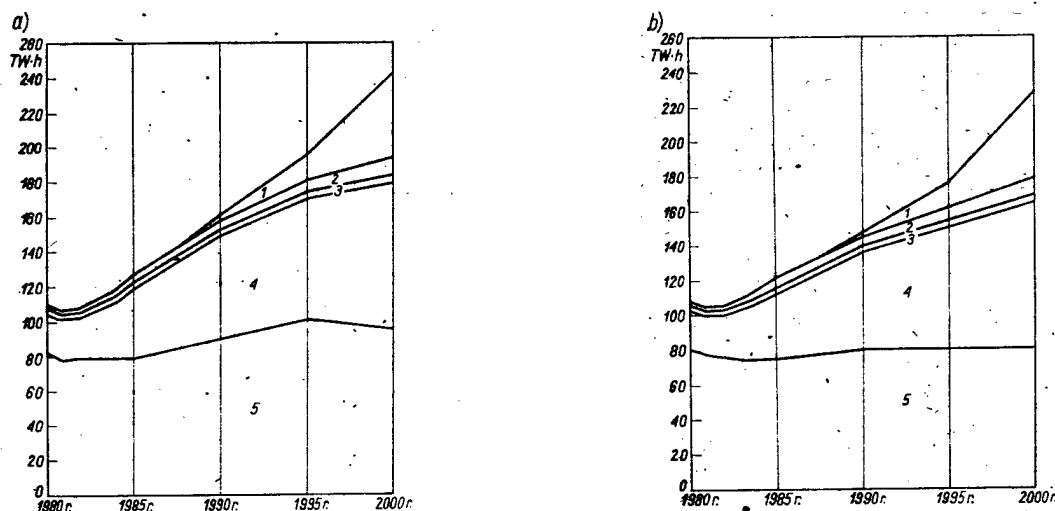


Figure 6. Structure of electric energy production in public-utility power plants: a) variant I, b) variant II. 1 - in nuclear power plants; 2 - in hydroelectric power plants; 3 - from other fuels; 4 - from brown coal; 5 - from hard coal.

#### Development Directions in the Brown Coal Industry

Geological-deposit conditions in the existing strip mines: Turow, Konin, Adamow and Sieniawa, have deteriorated greatly. The coal beds being exploited are deeper and in worse locations. To maintain the extraction of brown coal in these mines at the level of 36 million tons annually, regeneration investments will have to be made and more technological equipment will have to be furnished. In order to make better use of the existing power plant in the Konin region, a new strip mine, Lubstow, is being built.

The foreseen growth in brown coal mining will occur due to the Belchatow mine now under construction, which is to have an ultimate output of 38.5 million tons annually, making it possible to supply a 4,320-MW electric power plant. In addition, construction of other brown coal mines is envisaged, e.g., Szczercow, Legnica, Gubin-Cybinka-Mosty, Trzcianka--mainly as a fuels base for the power industry. Consideration is

also being given to construction of smaller brown coal strip mines (with an output of approximately 3 million tons annually) to meet the requirements of local industry and population, and possibly briquetting this coal.

Poland also has brown coal reserves with a high salt content in the Rogozno region near Lodz. The possibility of eventually using this coal for the production of average-calorific gas is being considered. Brown coal mining in the already existing mines and those expected to be built will be as follows: in 1985, 55-60 million tons; 1990, 80-85 million tons; in the year 2000, 110-120 million tons. The planned growth in brown coal mining will be achieved on condition that the basic machines and equipment will be furnished (excavators and dumping conveyors), belt conveyors, technological equipment, and spare parts for these machines and equipment. Total requirements for basic machines and spare parts to these machines during 1982-1990 are estimated at about 290,000 tons, and for belt conveyors and spare parts, at about 350,000 tons.

A program for the development of production of excavators and dumping conveyors, belt conveyors, and others machines and equipment for brown coal strip mining is being prepared. This program will be the basis for decisionmaking on the development of necessary production capacity, coproduction range and courses of action, which will ensure delivery of machines and equipment for the brown coal industry. The expansion of existing mining machines and equipment factories is envisaged (FAMAGO in Zgorzelec and FUGO in Konin, the construction of new facilities for the production of spare parts, rollers, the repair of the main technological equipment and the like, and the expansion of coproduction and the start of production of machines and equipment for the brown coal industry in other plants.

#### Development Directions in the Nuclear Power Industry

A continued dynamic development of the nuclear power industry in the world is taking place in recent years, despite a certain slowdown in the rate of development and delays in relation to previous forecasts and intentions.

At the end of 1980, 253 power reactors were being operated, with a total generating capacity (electrical) of 135,800 MW. In 1980 in the nuclear power plants approximately 660 billion kW·h was being produced, which was almost 8 percent of the world's production of electric energy. According to professional estimates, world nuclear power plant capacity will increase to 750-1,200 thousand MW in the year 2000, and to 2,000-2,500 thousand MW in 2020.

At the end of 1980 in the CEMA countries, 42 nuclear reactors were in operation, with a combined electric capacity of almost 16,000 MW. All of the CEMA countries intend to greatly expand their nuclear power industries. In the USSR, for example, the plan for 1980-1985 calls for a growth in nuclear power plant capacity from 12,600 to 37,000 MW and a growth in electric energy production in these power plants from 73 to 220-225 billion kW·h. In the European part of the USSR, only nuclear and hydroelectric power plants will be built; there are no plans for installation of new generating capacity in coal-, fuel-oil- or gas-fired thermal electric power plants (with the exception of local electric-power and heat-generating plants).

The nuclear power industry in Poland will develop within the framework of cooperation of CEMA member-countries. The principles of this cooperation were drawn up in multi-lateral governmental agreements. It was decided that mutual coproduction deliveries should be equivalent in value, however the nuclear fuel for the entire period of power-plant operation will be supplied by the USSR.

Construction of the first nuclear power plant in Poland in Zarnowiec began in 1982. Two VVER-440 (type PWR) [pressurized water reactor] power units, rated at 465 MW, will be installed during the first stage of construction. The next two units of the same type will be installed during the second stage. At present, design work is underway on construction of a second nuclear power plant, Kujawa, 4,000 MW, with 4 VVER-1000 (type PWR) units. The power plant will be located in the region of the lower part of the Wisla [River].

According to present forecasts on the development of the power industry, by the year 2000 it will be necessary to install a total capacity of 10,000-11,000 MW in the nuclear power plants. These power plants will be built primarily in the northern regions of the country, in view of the far distance of these regions from the coal basins.

Further development of nuclear power plants is expected only through the use of VVER-1000 reactors in the single-unit system, constructed in accordance with designs of 4 X 1000 MW power plants, standardized in CEMA countries.

The feasibility of constructing nuclear electric-power and heat-generating plants and heat-generating plants to supply the larger city-industrial centers and some towns is also being considered.

Development of the nuclear power industry requires expansion of the domestic industry producing power machinery and equipment. In order to produce equipment for the nuclear power industry, it is essential also to ensure deliveries of the necessary metallurgical materials, including high-quality carbon and alloy steels, forgings, pipes, welding materials, etc.

Measures are also being taken to prepare power-plant construction enterprises for the tasks arising from a program of nuclear energy development.

#### Environmental Protection Problems

Work is being conducted aimed at controlling pollution of the air, water, and land surface. All of the newly built power plants and electric-power and heat-generating plants are equipped with dust-extracting installations. These are basically electro-filters that are 99 percent efficient. The investments costs of these installations are included in the costs of constructing the new facilities.

In order to reduce air pollution, dust-extracting equipment in power plants and electric-power and heat-generating plants now in operation will be modernized. The modernization will reduce the amount of ash emitted yearly by approximately 120,000 tons.

The problem of desulfurization of exhausts in Poland has not yet been solved. Pilot installations for desulfurization of exhaust gases will be installed in units built after 1985. The experience gained thereby will be applied in other facilities where larger concentrations of sulfur dioxide occur. Polish hard coal has a relatively low sulfur content (to 1.5 percent). Only in a few mines is the sulfur content higher (2-3.5 percent, average).

The ash storeyards near the power plants and electric-power and heat-generating plants are a serious pollution problem. The following measures are being taken to reduce their negative effects:

- hydrotransport, eliminating dusting during transport (this is the solution used in newly built power plants),
- biological safeguarding of storeyards,
- increased economic use of ashes and slag,
- higher embankments on the storeyards to enlarge their capacity and reduce the amount of area occupied,
- use of post-mining excavations for storeyards.

Construction of sewage-treatment plants and purification equipment in the new plants, as well as modernization of existing equipment, should improve water pollution control and waste-water management. The use of closed water-drainage systems is also anticipated.

The rule in existing and newly built power plants is that the temperature of the water being discharged cannot exceed 26 deg C. This prevents further biochemical breakdown in rivers and lakes.

#### Towards More Efficient Consumption of Electric and Thermal Energy

The growing demands of the national economy for electric and thermal energy cannot be fulfilled without intensive measures aimed at more efficient and economical consumption of energy. The following are the principal directions for improving the efficiency of electric energy consumption:

- an overall reduction in the materials-intensiveness of industrial production,
- changes in production technology which will reduce the electrical-intensiveness of products,
- better selection of drive systems and use of systems with electronic control of revolutions,
- production of modern, highly efficient, household appliances,
- modernization of lighting through use of modern, economical light sources,
- proper operation of electrical equipment and maintenance of protection apparatus in good technical condition,
- continued modernization of transmission and distribution networks and networks and equipment in industrial plants.

The main directions for improvement of thermal energy consumption efficiency include:

- a drastic reduction in heat losses in housing and public-building construction (these losses are 30 to 40 percent higher in Poland than in other countries),
- use of better construction in heating-systems (thermal insulation and durability of pipelines and insulation),
- use of automatic control systems in heating-plant networks and buildings,

- modernization of heating and ventilating systems in industrial accommodations;
- modernization and replacement of obsolete boiler installations with new and much more efficient ones;
- better utilization of exhaust heat in industrial plants.

Energy difficulties can also be minimized by using local sources of energy (construction of small hydropower plants, solar collectors for water-heating, windmills, heat pumps, and use of biomass, peat and timber).

In addition to technical measures, in order to more efficiently and economically consume electric and thermal energy economic measures must be applied--a further increase in the price of fuels and energy and a change in the unfavorable ratios in relation to prices of other products.

### Conclusions

--Further development of the power industry should be correlated with the development of the national economy, including a comprehensive expansion of the fuels base, the power machines and equipment industry, the construction of power plants and networks, and repair and scientific-research facilities.

--A planned increase in power industry capacity should take into account the shortage of capacity which occurred in past years, and the need to expand reserve capacity so as to make it possible to conduct planned and emergency repairs of production facilities without disconnecting power to consumers.

--The electric power network must be expanded so as to be able to carry power out of the new power plants and transmit and deliver electric energy to consumers with the required reliability (particularly for the populace and agriculture). An expansion of the basic 400 kV transmission network is now underway. The construction of a 750-kV line is anticipated in order to facilitate drawing of electric energy and power (and transit, also) from the Soviet Union. A 110-kV primary distribution network is being expanded. The development of the food economy requires a fundamental expansion and modernization of the medium-voltage and low-voltage networks.

--The basic fuel for the production of electric energy in the immediate future will be brown coal, and particularly the deposits of this fuel in the Belchatow region. The development of the brown coal industry is determined mainly by the feasibility of expanding the machinery and equipment production and repair facilities for strip mining.

--Rapid development of nuclear power as a basic source of primary energy after 1990 is essential. This is determined by expansion of the domestic industry, which should ensure deliveries of machines and equipment within the framework of coproduction with other CEMA countries.

--The construction of further hydropower plants on the Wisla and Odra [Rivers] and their tributaries is advisable. The utilization of small waterways for restoration and expansion of the so-called small hydropower industry is also anticipated. Pumped-storage hydroelectric power plants will also be built.

--Centralized heating-plant systems continue to be developed, using electric-power and heat-generating plants, mainly hard-coal-fired, as the source of heat. This makes it possible to combine the production of thermal and electric energy, permitting large savings in fuel and also improving air pollution conditions in the cities. The use of nuclear heating-plants and electric-power and heat-generating plants is being considered for the future.

--Domestic 360 MW units will be used in conventional thermal electric power plants, and in later years, 600 MW units. The basic units in the nuclear power plants will be the 1,000-MW VVER-1000 units. In the electric-power and heat-generating plants, 50, 100 and 180 MW electric capacity units will be used, with thermal ratings of 256, 422 and 842 MW, respectively.

--The specialized power industry machinery and equipment industry must be expanded so as to be able to satisfy the requirements of the domestic power industry, and also to produce for export (mainly complete power industry facilities). The gradual elimination of import (particularly from the second payments area [capitalist countries] and its replacement by domestic production, is indispensable. The industry producing equipment for nuclear power plants, in coproduction with other CEMA countries, must be expanded.

--The Polish power industry works within the framework of the Joint Electric Power System of the CEMA countries, which permits a favorable exchange of power and electric energy in particular periods of the day, month and year.

--Simultaneously with the construction of new generating capacity in the power industry, action must be taken to make the consumption of thermal and electric energy more efficient and more economical.

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## SUCCESS OF INDUSTRIALIZATION POLICY, NEW DIRECTIONS STUDIED

Bucharest ERA SOCIALISTA IN Romanian No 16, 20 Aug 82 pp 10-13, 44

[Article by Mihai Paraluta]

[Text] In the years of socialist construction, particularly following the 9th party congress, a strategy for the long-ranging industrialization of Romania was worked out and begun, one which corresponded to the specific conditions of the country, a strategy which fits into the general laws for development of production forces, within the trends brought by the technical-scientific revolution specific to the current age. The basic coordinates of this strategy may be summarized as follows: sustained development of socialist industry, its firm orientation toward the highly technical branches and subbranches which use on a high level the resources of raw materials and social labor; the harmonious, proportioned development of all branches of the national economy and, in this framework, insuring a correct ratio between industry and agriculture; the rational placement of production forces on the territory and proportional development of all zones; Romania's efficient participation in the international division of labor; rise in the degree of material civilization for all the people.

The way Romania looks today--with a powerful industrial base, with an agriculture which is radically changed compared with the past, in a full process of renewal and placement on the basis of achievements of the scientific-technical revolution, with a new economic infrastructure, with a network of research, education and health which in many regards is comparable to that of the developed countries, with a continually rising material and spiritual standard of living--would have been inconceivable without promotion of the policy of the socialist industrialization of Romania.

Even at the start of its activity, our party saw in industrialization the only way for getting Romania out of the economically backward state in which it was and for firmly placing it on the path of progress and civilization, for having superior utilization of the material and natural resources we have available in the interest of the entire nation and for achieving a real national independence. But under the conditions of the bourgeois-landowner Romania, of the political, economic and social structures of that period, when the national economy was to a great extent dependent on the interests of the big international monopolies which wanted to keep the country as an agrarian annex which mainly supplied raw materials, the thesis for creating a national, complex industry, the thesis for industrialization did not find the necessary favorable ground.

Only after the victory of the revolution for social and national, antifascist and anti-imperialist liberation were the political conditions created to move to industrialization of the country. At the national party conference of October 1945 the main goals of industrialization were formed in broad lines. Together with achievement of the entire political power by the working class, allied with the working peasantry and the other categories of workers and elimination of capitalist ownership of the main means of production, Romania entered the stage for fulfilling the tasks of the socialist revolution, among which a leading place was held by industrialization.

With a view to fulfilling this goal of major importance, the main material and financial resources and the material resources of Romania were firmly oriented toward the priority development of industry, as the branch which provides for the stormy growth of production forces at the scale of the entire society, which provides the impetus for the progress of the other branches of the national economy, which creates conditions for the intensive development of agriculture and leads to the quantitative and qualitative growth of the working class. Also, industry, being directly linked with the scientific-technical revolution, asserts itself as the main factor for broad-scale promotion of technical progress in all areas of material production, insuring the growth in social labor productivity and advance of the entire economy.

Of course, in defining the industrialization strategy, more and more in mind was the fact that this was being carried out in a developing socialist country and that the general laws of the socialist revolution must be applied to the specific conditions of Romania. It became clear that there are no patterns and single prescriptions for solving the new problems raised by development of the production forces and the creation and extending of the material-technical base and that the forms and methods for solving the tasks of the socialist revolution depend on a specific set of economic, social, political and historical factors.

We know that socialist industrialization is not a law which is generally valid for all the countries which have moved or will move to socialism, but rather for those in which this problem has not been solved within the capitalist economy. In these conditions, Romania, just as the majority of socialist countries, in order to build the multilaterally developed socialist society, was compelled to give priority attention to creating a material-technical base for the new socialist system and carrying out socialist industrialization.

However, the following question is posed: for the countries in which industrialization is a law for creating the new system, must the solutions of economic policy, development strategies and ways for solving the problem of accumulation and so forth be identical? Clearly not! In this regard there is special importance in the dialectical relationship between the general and the particular, taking into consideration in establishing the industrialization strategy and in setting the stages for carrying out this complex and long-lasting process the specific situation in each country, the level of development of industry and of the structure of material production, primarily industry, and the resources of raw materials and labor force available and level of training of the cadres, the country's financial possibilities, the distribution of production forces on the territory, the international situation and so forth.

As a result, the industrialization process in each country which moved to the path of socialism is being carried out in a great variety of forms which, in the end, lead to the same goal: the transformation of industry into the leading branch of the national economy and the creation of the material-technical base for socialist society.

The 9th party congress marks the main point for the move to working out our own concept, co responding to the realities of our country regarding socialist industrialization, putting an end to tendencies from prior stages for the mechanical, cut and dried application of experiences which were valid under other conditions. It is to the merit of our party and Comrade Nicolae Ceausescu that in establishing the guidelines for industrialization of Romania and in solving certain complex tasks of socialist construction the reality of our country was kept in mind, that the nature and spirit of scientific socialism and the general laws of the socialist revolution and socialist construction were applied creatively to these realities.

We know that, despite the progress recorded in the country's industrialization policy, in the stages prior to the 9th congress certain peak branches of industry, brought by the scientific-technical revolution and indispensable for modernization of industry and the entire national economy, were neglected. As the party's secretary general asserted at the national party conference of 1967, our experience shows what negative consequences the insufficient concern can have for development of modern branches of industry like electrotechnology, electronics, fine mechanics, machine tools and for fully utilizing the reserves of socialist agriculture, for achieving the most rational possible relationship between the production of consumer goods and the production of the means of production. Continuing this orientation would have meant keeping dependance on the industrialized countries with regard to supplying the economy with machines and tools, which would have led to deepening the technological gap, not to lessening them.

Looking back at the process for development and modernization of the national economy one may observe that throughout the years following the 9th party congress the judgments and options in the area of industrialization took into account the realities of Romania, the natural wealth as well as the human resources we have available, considered in their rise, and took into account the trends resulting from the modern scientific-technical revolution and the opportunities which result from this for a quantitative and qualitative growth of the national economy, for getting Romania as quickly as possible out of the stage of the developing country and placing it among the countries with an average economic development.

Although successive improvements in the industrialization strategy took place from one stage to another, this remained a constant of the party and state economic policy in all the stages of socialist construction. As a result, the five-year plans have insured the creation of the material-technical base for socialist society in industry and agriculture and the transformation of industry into the leading branch of the national economy. Together with the 1971-1975 five-year plan, which inaugurated the stage for creation of the multilaterally developed socialist society, the entire policy for the country's socialist industrialization was subordinate to the development and modernization of the material-technical base in accordance with the requirements of the new stage, with the specific domestic and international conditions, with the needs for moving from the phase of quantitative accumulations to a new, higher phase, that of the struggle for quality in this area, too.

One should emphasize that the organization of the national economy on the basis of the highest level of science and technology, the broad-scale use of the newest achievements of world technology in all branches of material production represent a central goal of our country's industrialization policy. This orientation permits creation of the material-technical base for the multilaterally developed socialist society, corresponding to the requirements of a modern technology, creation of new production capabilities and entire industrial branches, proceeding from the world level in the particular area. Of course, uninterrupted scientific-technical progress, placement on the basis of the most advanced technology for all branches of the national economy to the greatest degree mean increasing the contribution of our own scientific research, broad promotion of technical progress in all production sectors, extending mechanization and automation, priority development of the peak branches of the scientific-technical revolution, close combining of science and technology with education and production, generalization of the advanced forms and methods for organizing and carrying out activity of research and technological development.

Through the remarkable results obtained, the industrialization policy promoted by the party proved to be correct and viable. In the three decades of 1950-1980 a true leap was produced in the development of production forces in industry and the other branches of the national economy, there was a radical change in the country's economic configuration, the profile of an industrial country was formed, and particularly in the last decade there was a continual reduction in the economic gaps compared with the industrialized countries. So total industrial production in these three decades rose 33 times, while there was priority development of the peak branches; the chemical industry rose 178 times, the machine construction industry--111 times. There also were rapid rises for the other branches of industry: electric and thermal energy grew 36 times, the metallurgical industry--30 times, light industry--20 times, the food industry--9.4 times. At the same time labor productivity in industry increased 9 times, while the number of worker personnel grew 3.6 times.

Industrialization brought profound changes both to the structure of the national economy by branches as well as within them. The figures below show overall the main changes which occurred.

Changes Specific weight in national income (%)	Industry	Construction	Agriculture	Telecommunication + Transportation
1938	30.8	4.4	38.1	6.5
1965	48.9	8.0	28.9	4.0
1980	58.6	8.8	14.5	7.0
Specific weight in total labor force (%)				
1950	12.0	2.2	74.1	7.0
1965	19.2	6.3	56.5	7.8
1980	35.5	8.3	29.4	8.9
Rise in national income 1938= 100				
1950	164	238	70.0	81
1965	12 times	14 times	118	477
1980	59 times	47 times	165	16 times
Rise in fixed capital 1950=100				
1965	357	791	159	177
1980	20 times	53 times	482	689

As the figures show, the industrialization policy for Romania sought to insure a balance in the rise of all the branches of material production. At the same time a process took place which brought the structure of the Romanian economy closer to that of the industrialized countries. For example, the percentage of industry, construction and transportation in total national income is at the level of and in some case beyond the level of the industrialized countries.

Profound changes took place in the very structure of industry, as the priority branch of the national economy. The trend for modernization of the structure of industry by subbranches and products with time became a constant of the industrialization policy. A significant change is the fact that the basic branches of the modern industry--metallurgy, machine construction and chemistry--in 1980 held around 55 percent of total industrial production. The percentage of the Romanian machine building industry in total industrial production of around 31 percent is approximately at the same level as that of France or England, while that of the chemical industry--15 percent--is close to that of France, England or Italy. A similar situation also exists for certain types of machinery and equipment, metallurgical and chemical products as well as within certain basic industrial branches and subbranches. In exchange, smaller percentages compared with the developed countries are seen mainly in the peak technical sectors such as electronics and electrotechnology, automation, computer technology, fine and optical mechanics, special and alloy steels, some rolled metals in pipes, certain plastic products, dyes, small-tonnage chemical products and so forth.

One may estimate that in the 1976-1980 five-year plan an important stage was closed in the process of Romania's socialist industrialization, a period in which Romania came closer from the viewpoint of quantity (and for certain industrial products we are even exceeding) the per capita production in the economically developed countries. Among these we mention steel production, cement, tractors, trucks, freight cars, chemical fertilizers, chemical fibers, plastics, synthetic rubber, refrigerators, televisions, radios, knitwear, footwear, food products. Of course, however, one cannot bypass the fact that there still are big gaps to be eliminated with regard to labor productivity, degree of utilization of resources and so forth.

In light of the clear realities, the thesis started by some foreign theoreticians according to which Romania did not proceed well, giving such great attention to industrialization, is proving to be totally false and without any kind of scientific support and by the fact that basically it denies the need for applying general laws for the progress of production forces to all countries it has a deeply reactionary nature.

At the broadened RCP CC plenum in June, Comrade Nicolae Ceausescu gave a clear answer to this thesis: "If by moving to the path of socialist construction Romania would not have taken action for the powerful development of production forces, for achieving a modern industry on the basis of the most advanced technologies, we would have continued to remain a poorly developed country dependent on the industrialized countries."

In the current five-year plan and throughout the 90's, according to the guidelines established by the 12th party congress, the process of industrialization and development of production forces in all the branches of material production will continue at a higher level, primarily in industry and agriculture under conditions of emphasizing the quality aspects in all areas of activity.

What is being sought on a priority basis in the current five-year plan is broadening of our own base of raw materials and energy, speeding up of the process to restructure industry by the preponderant growth in the branches of advanced processing, development of the material-technical base needed to carry out the new agrarian revolution, firm continuation of the policy of the balanced placement of production forces on the territory and increase in the role of science in modernization of the national economy.

Of course, industrialization is a long-lasting process which covers the entire period which a country goes through from the stage of a developing country to that of a country with average economic development up to that of an industrial country. Romania currently is in a full process of transformation into a country with an average economic development. Depending on the characteristics of this stage, the strategy of industrialization also has certain particular features specific to it. A new element results from the fact that in Romania the resources for extensive growth to a large extent have been exhausted, with its following that all development should be based on intensive factors. This element causes changes in the concept and orientation of the industrialization policy.

The requirements for moving to a new quality in the process of Romania's social-economic development and of broader intensive reproduction demand that all necessary conditions be insured so that the current decade actually becomes the decade of science. This orientation takes into account that mankind is on the threshold of the second industrial revolution, while its achievements must be kept in mind all through our industrial development. At the level of economic effects, this means that the overwhelming portion of the rise in industrial production and in national income must be insured by faster growth in social labor productivity by the scientific organization of production and work in all branches of the economy. At the same time, it takes into account the current world economic context, which is characterized by intensification and aggravation of the world economic crisis, rise in phenomena of economic instability, reduction in development rates in nearly all the countries, escalation of prices for a number of raw materials and by rising interest rates and so forth, situations which in one way or another are making their mark on Romania's economic growth, too.

The current five-year plan forecasts a number of reorientations in Romania's industrialization policy depending on the energy crisis and its implications for our national economy, on the development trends of the world economy and on our own raw-material resources. This means improvements and structural changes both within industry as well as among the branches of the national economy.

A problem of particular importance for Romania's social-economic development is supplying the necessary raw materials, fuels and energy from our own resources to a greater and greater proportion, utilizing all the resources we have available with greater efficiency, moving to the broad-scale recycling of materials, complete recovery of reusable heat and energy resources and so forth. Under such conditions, the extraction industry is the priority branch. So for the current five-year plan what is forecast for the extraction industry sector is important developments in production, particularly for the primary energy carriers--coal, natural gases and oil. At the same time, also in mind is providing to the greatest extent the national economy's needs for iron ores, lead, zinc, copper, manganese, rare metals, bauxite resources and so forth. This is a long-lasting trend and is one of the ways to free

the economy from the powerful pressure exercised by the importing of raw materials on the balance of foreign payments. And what is more, the rising course of our national economy and sustained development of industry are decisively affected by carrying out the programs to increase the production of fuels and raw materials and by the degree to which we shall succeed in covering the need for raw materials from domestic resources.

With regard to restructuring the industrial processing branches, the main goal is to increase the degree of technicalness of all the peak branches and subbranches of industry, giving priority to the branches and subbranches which are low consumers of energy and raw materials. This goal of major importance, on one hand, is to be fulfilled by development of the machine construction and chemistry branches at high average rates and, in this framework, the highly technical sectors and with a high degree of utilization of the country's resources and, on the other hand, by setting new sizes for the energy-intensive branches depending on the current opportunities and requirements, with their developing at rates lower than the average for industry. At the end of the five-year plan we are to reach a point where the basic processing branches--metallurgy, machine construction, chemistry, consumer goods industry--will represent around 90 percent of industrial production.

Basic changes are occurring in other regards, too. Years ago it was felt that faster growth in energy production compared with industrial production was a law of socialist industrialization. This thesis, valid within certain limits, under conditions of the abundance of energy resources and extensive development, has become a lapsed one; under conditions of current energy restrictions, it must be reconsidered. Actually, starting with the last five-year plan, the growth in industrial production and national income in Romania outstripped the rise in electric energy production.

In the new stage, the essence of industrialization lies in achieving a percentage point of growth in industrial production and national income with the smallest possible consumption, a subunit of energy. In the current five-year plan, the planned ratio between growth in industrial production and electric energy production is nearly 3:1, while that of national income and energy production is more than 2:1. Insuring energy independence by the end of the current decade--a strategic goal established by the 12th party congress--is the basic requirement for keeping economic vitality and achieving growth rates for industrial production in the coming period.

What characterizes the entire industrial development of Romania in this decade really are restructuring and resizing of the branches of the national economy depending on energy restrictions. In this view, the emphasis in the iron and steel area is being placed on raising the degree of utilization of metal, on increasing the share of highly alloyed steels as well as products with high degree of purity. What have priority in rolled steel and pipe production are the development of manufacture from alloyed steels and fireproof steel for the building of equipment and for the machine building industry. Preponderant in machine building are electronics, electrotechnology, fine mechanics, the production of complex installations and of automation equipment and so forth. In the chemical industry, the restructuring of production seeks to give a priority increase in the production of varieties with a high degree of processing and with high value and reduced consumption. Insured by this orientation is doubling of the quantities of oil products intended for chemification under conditions in which the quantity of crude oil subject to processing remains constant or even demonstrates a slight lowering trend. In the chemical

fertilizer industry, a big energy consumer, priority is being given to modernization of manufacturing techniques and obtaining the fertilizers in a structure which is adequate for the Romanian pedoclimatic conditions. Substantial increases are to be achieved in the small-tonnage and fine-synthesis chemistry, a sector of high technicalness and economic efficiency. In the building materials industry, a branch of an energy-intensive nature, the stress is being placed on priority increase in the products with reduced energy consumption, on utilization of natural deposits to a greater proportion and on introduction of secondary products from the industrial processes into economic circulation in higher quantities.

In the industrialization policy of any country, there is particular importance in correctly defining the relationship between the development of production forces in industry and agriculture. It is certain, both on the basis of the experience of other countries as well as Romania, that any tendency to underevaluate the role of agriculture in development of the national economy causes inevitably certain imbalances. Industrialization in general and socialist industrialization in particular, in a broad view, includes as an organic component the placement of agriculture on modern bases and creating the conditions to change agricultural work into a version of industrial work. And a modern, intensive agriculture of maximum productivity can only be achieved under conditions of the existence of a powerful industry capable of providing for the material-technical needs of agriculture.

As we know, Romania currently has available a powerful agricultural machinery production industry, while the share of the chemical industry which produces chemical fertilizers and other products for agriculture is exceeding 10 percent of this branch's total production. Industry's contribution to creating and developing the material-technical base of agriculture, however, is not reduced just to these branches; in one way or another, nearly all the industrial products are also intended for agriculture. Primarily I have in mind the branches such as energetics, construction materials, machine construction, metallurgy and so forth.

One may determine that, together with the development of certain basic branches of industry, the conditions necessary for the industrialization of agriculture also have been created. The fixed capital from agriculture in the 1950-1980 period grew more than 5 times, of which the number of tractors rose 11 times, the number of self-propelled grain-harvesting combines grew nearly 9 times. From the viewpoint of agriculture's being supplied with agricultural machinery, Romania has made a true leap--from an agriculture with an extremely low degree of supply with machinery from Europe to an agriculture with a modern technical base. At the same time, a powerful process of zootechnical industrialization has taken place plus the creation and development of industrial complexes for raising animals and poultry. The irrigation of another one-fourth of the country's arable area could not have been achieved without the existence of a powerful metallurgical and machine construction industry, one capable of supplying pipes, pumps, motors as well as other machinery, equipment and necessary materials.

Despite the massive efforts made by our socialist state, that material-technical base needed to achieve an intensive, highly-productive agriculture still has not been created, one which corresponds to the current level of development of production forces and of the national economy as a whole. There are a number of lags in agriculture which have come out, particularly in recent years. These lags to a great extent are also the result of neglect during certain periods in the development of agriculture.



Proceeding from these considerations, through the investment policy and other means, certain negative effects of the previous concept of agricultural development will be eliminated in this five-year plan and the relationship between industry and agriculture is being reconsidered with a view to optimization of it. With regard to the place and role of agriculture in the development of Romania's production forces, the party's secretary general stressed at the RCP CC broadened plenum in June: "Looking to the future, Romania's economy will have to be based on a modern, powerfully developed industry, on a modern, highly-productive agriculture, continuing in the future, too, to remain an industrial-agrarian country. On this base the development of the production forces, the general progress of society and rise in the people's material and spiritual well being will be insured." From here basically we have the placement of industry and agriculture at the same level and establishment of a new correlation between these two basic branches of the national economy.

Continuation of the country's industrialization policy and fulfillment of the goals established for the 1981-1985 period will bring qualitative changes in the structure of Romanian industry, modernization corresponding to the requirements of the scientific-technical revolution and the material-technical base, development and sustained modernization of agricultural production and the other branches of the national economy and improvement of placing the labor force on the territory and eliminating the economic differences between Romania's zones and counties in general lines. All these continually and more visibly will have repercussions on the standard of living and the quality of life of all our people.

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## PROGRESS REPORT GIVEN ON OLT CIT AUTO PRODUCTION

Bucharest SCINTEIA in Romanian 3 Nov 82 p 2

Interview with Engr Nicolae Andreev, director general, chairman of the board of directors of the Oltcit joint society, and Jaques Pellissier, deputy director general of the Oltcit joint society, by Corneliu Carlan and Nicolae Petolescu: "The Oltcit Automobile at the Start of the Road"; date of interview not given; passages enclosed in slantlines printed in boldface/

Text On 3 January 1977, the secretary general of the party, Comrade Nicolae Ceausescu, paid a visit to the municipality of Craiova, an occasion on which, on the industrial platform in the southeastern part of the city, the site of the enterprise for Oltcit small-displacement automobiles was established. The achievement of one of the most modern production units in the country, a result of collaboration with the French Citroen firm, took shape at that time. The first bucket of concrete for the foundation of the new facility was poured on 17 June of the same year. Days and months of intense work by the builders, assemblers and fitters for erecting this imposing structure followed. At the same time, a broad program for assimilating--at the parameters of the high qualitative requirements--parts and subassemblies for the future Romanian automobile was launched in dozens and dozens of enterprises in the country.

Behold, now, after an intense construction effort, /the great automobile plant in Craiova has begun to produce/.

We had a discussion with Comrade Engr Nicolae Andreev, director general, chairman of the board of directors of the Oltcit joint society, and Mr Jaques Pellissier, deputy director general in the French part of the society, about the constant activity devoted to finalizing this facility, about the technical equipment of the enterprise, about the vocational training of the people and the organization of their labor, and about the performances of the automobiles made there.

Question The conversation with Engr Nicolae Andreev opened with a question about the importance of the achievement of this enterprise to the municipality of Craiova and to our national economy in general.

[Answer] The Olcit joint society--the speaker told us--was created as a society for production and marketing of small-displacement automobiles, in collaboration with the French Citroen firm. In accordance with the provisions of the contract for founding this society, a production unit provided, /in the first stage, with an annual capacity of 130,000 automobiles/, with an output of /150,000 automobiles per year/ to be attained later, was built in Craiova. This means the departure of an automobile from the assembly belt in less than 2 minutes. Of course, the achievement of this big economic objective required a great construction effort. It can be said that the plant in Craiova is one of the modern factories of this kind in Europe, due to the high degree of mechanization and automation of the production process, due to the system of organization and management of manufacture, due to the advanced technologies adopted. The plant was built on an area of 115 hectares. In order to give you a picture of the volume of labor put forth to achieve this objective, I can state that it was necessary to shift about 2.5 million cubic meters of earth and to prepare three terraces with a height difference of 1.5 meters. About 25,000 tons of metal structures were made and assembled for the main manufacturing halls.

[Question] Who did this work?

[Answer] While the design was drawn up by specialists of the Bucharest Technological Engineering and Design Institute for Machine Building Enterprises, according to Citroen specifications, the construction-assembly and installation work was done, under the management of the Romanian party, by the Craiova Industrial Construction Trust and by the Trust for Chemical Equipment Assembly, the Installation and Automation Trust and the Trust for Insulation and Industrial Work, all three in Bucharest.

[Question] You referred to the construction proper, to the technical equipment, but, naturally, as in any production process, the people are decisive. How did you act to train the staff of workers and specialists who work here?

[Answer] At present, /3,100 workers perform their activity in the unit, of whom about 750 people, who form the basic personnel, were trained in the plants of the Citroen firm/, where they actually worked for a period of 6-18 months, depending on the complexity of the trade in which they were to specialize and work in our enterprise. At the same time, the personnel need was supplemented with skilled personnel who worked at specialized enterprises in the country and in industrial units in Craiova and with graduates of the industrial secondary school in the locality, sponsored by the enterprise.

[Question] What is the stage of the production activity in the unit?

[Answer] Please bear in mind that, at the present time, all the sections along the technological flow are operational. But in order for you to get a more exact picture of our activity, please accompany me to the production halls along the entire technological flow....

...In the first section that we are entering, that /for drawing and assembly of bodies/, the nearly 600 sheet-metal components that enter into the composition of the automobile are provided. The main subassemblies are executed on the 12 automatic welding lines, as well as the assembly of the finished body on a 127-meter-long technological line. We are entering /the painting section/, where the anticorrosive protection of the bodies and other parts is accomplished. The operations are completely

automated, from the entry of the components into the section, to their departure from it. The complex industrial robots, for the priming and final-painting operations, particularly catch the eye. Another important section of the plant is the /mechanical/ one, where a number of parts and subassemblies are made, such as the engines, front and rear axles, suspension, steering and brakes. The hydraulic system for collecting, treating, sorting and briquetting the shavings of cast iron, steel and non-ferrous metals constitutes an innovation that particularly catches the eye. In another section, that /for making the big-series subassemblies/, the process is organized on 42 specialized technological lines. The anticorrosive protection of the subassemblies, such as that by metal coating, is also accomplished here.

And, finally, /the general-assembly section/. There are 314 assembly conveyors and elevated and ground conveyors here. Laid end to end, they total about 33 km in length. Despite the apparent crowding of equipment and installations, one distinguishes the rigors of the modern technological flow, with the activity going on continuously, steadily, with the precision imposed by the pace of the assembly belt.

Talking about the organization and performance of the activity of the enterprise, the speaker drew our attention to two very important aspects. The first referred to /the requirement of great quality in the automobile/. In the production process, the control is organized in close connection with the manufacturing flow. The control is done with great strictness after each technological operation. In addition, there are research and laboratory sectors, complete test stands at various workplaces and a test track at the enterprise.

The second aspect involves /Romanian industry's participation in achieving the automobile/. In fact, /besides the French partners, about 100 units in the most varied economic branches of the country/--metallurgy, chemistry, light industry and so on--/collaborate/ to make the Olcit automobile.

[Question] The readers of the newspaper have shown themselves to be interested in knowing about the performances of the automobiles that you make. What can you tell us about them, Comrade Director General?

[Answer] The Olcit automobiles cover the small and medium range wanted today in the country and abroad, presenting a number of advantages to the clients. The first of the advantages refers to its utility. The Olcit has a trunk door in back, a hinged back seat, and possibilities of installation of about 25 pieces of equipment that can be added as accessories, at the client's request, to improve the comfort (from a wiper for the rear window to a digital clock). In addition, the automobile is distinguished by great ease in handling, it possessing torsion-bar suspension, as well as a steering system of Citroen-type construction. At the same time, the reliability of the subassemblies, the fuel consumption and the simplicity of the construction solutions provide an operating and maintenance cost lower than the automobiles in the same class. As the visitors to the Bucharest International Fair could also see, /two types of Olcit automobiles are being made at present/: 650 and 1,100 cubic cm. The first type, with two cylinders, consumes 5.8 liters of fuel per 100 km on the highway. The second type, with four cylinders, consumes 6.7 liters per 100 km on the highway. Both types have air cooling and an engine with five gear steps (four synchronized gears for forward and one for reverse) and are fed by a 12-volt battery. The dimensions of the body are the same for both types: 3,732 mm in length, 1,538 mm in width and 1,430 mm in height. In both variants, the Olcit has five places and a

40-liter gas tank. In the advertising folders and in the technical manuals of the automobiles, those who like can also find other data that are of interest to them.

[Question] We are talking with Mr Jaques Pellissier, the deputy director general of the Olcit joint society, about the collaboration of the French and Romanian specialists in preparing for the manufacture of the small-displacement automobiles.

[Answer] /The collaboration between the French and Romanian specialists does not pose problems/--Mr Pellissier tells us. This automobile exists and it is achieved in two construction types. /The first automobiles meant for marketing in the western market of the Citroen firm were achieved and tested in the plant/. Which means that, at the present time, the range of Citroen automobiles may be supplemented with motor vehicles with capacities of 6,500-1,300 cubic cm, which certainly will attract a number of clients wanting cars in this class.

Consequently, the range of automobiles achieved by our industry is enriched and diversified with new types. The most recent achievement--the Olcit automobile--continues the Romanian-French collaboration in the field of automobile construction.

Appreciated by the specialists in the country and abroad and received with justified interest by the general public on the occasion of this year's edition of the Bucharest International Fair, /the Olcit automobiles are now hitting the road/. To those who will be at the wheel of the Olcit, either on the roads in the country or on the highways of the world, the builders of motor vehicles in Craiova wish: "Pleasant journey!"

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# ROLE OF RESEARCH, FERTILIZERS IN INCREASING CEREAL YIELD

Bucharest ERA SOCIALISTA in Romanian No 17, 5 Sep 82 pp 4-6

[Article by Dr. Docent Engr. Cristian Hera, director of the Fundulea Research Institute for Cereals and Industrial Crops]

[Text] The profound analysis of agricultural matters at the work conference held at the CC of the RCP on 19-20 August 1982 pinpointed the fact that the rapid increase in cereal yield is one of the central issues of our agriculture, one that does not stem from situational reasons but reflects a guideline based on favorable natural conditions, on the country's great farming potential, on the ability of people in agriculture and of scientific research to bring about a genuine turn in this area. Pointing out again the outstanding role of cereals, the existence of a valuable experience, Nicolae Ceausescu dwelt on the importance of stepping up research, of achieving a closer link between research and production, so that the best possible approaches may be used in agricultural production.

The dynamics of Romanian agricultural development during the last 3 decades demonstrates that after 1950 the yield of cereals and industrial crops has been continuously growing, in contradistinction to the interwar period, whose characteristic involved stagnant level of farm yields, determining impact of climatic factors and very slow integration of technical advances. Consequently, as a result of financial efforts of the state to modernize agriculture Romania's average wheat output has been relatively constantly increasing, on the average by 63 kg/ha annually, that is exactly at the same rate as in a country with a very intensive agriculture as is England (the difference is provided by the initial level of production: England started from 3500 kg/ha and reached 5000 kg/ha, Romania started from 1000 and reached 2500 in 1975). The analysis of the increase obtained indicates that production was determined during this period in a proportion of 67% by the new strains and techniques used, with climatic conditions influencing only 33% the agricultural output.

The same applies to the corn yield, which started systematically increasing in 1965, under the favorable conditions resulting from modern technology and the overall use in production of corn hybrids evolved at the Fundulea Research Institute for Cereals and Industrial Crops. During the 1965-1975 period, the average production increase was 140 kg/ha annually, with the increase being caused 71% by new hybrids and modern technology. The barley output, which in interwar Romania stagnated at an average around 1100 kg/ha, grew slowly, and doubled during the 1955-1970 period. A leap was achieved

after the introduction in production of the Miraj strain and the farming technique specific of this strain. The production of other species of cereals and industrial crops showed similar dynamics.

In surveying this evolution of cereal production we cannot overlook the fact that the results obtained so far do not meet the top potentialities of our agriculture. The productive capacity of the soil is not used everywhere with maximum efficiency, and this evidences the requirements which agricultural production and research are facing.

Sensible, modern and efficient farming involves reassessment of the entire concept of farming, of use of agricultural techniques. This is a conclusion that forcefully results from the speech of Nicolae Ceausescu at the recent work conference at the CC of the RCP and which must become a guide to the whole activity of all workers in agriculture.

We now have strains of wheat and barley capable of yielding 6000-8000 kg/ha as a result of proper use of current techniques. While in 1970 more than 98% of the area under wheat was taken up by imported strains, today more than 75% is under Romanian strains. More than 90% of the area under corn uses Romanian hybrids, and 100% of the area under sunflower and barley uses biological strains developed in Romania. Under experimental conditions using wheat strains Fundulea-29 and Lovrin-32 productions of more than 8000 kg/ha were obtained this year, and the Miraj and Productiv barley strains yielded productions of up to 8300 kg/ha. In the Transilvania Plateau, Transilvania-1 wheat strain yielded productions of over 7000 kg/ha. Moreover, the output of cereals and industrial crops in this country is fully obtained by means of unique technologies developed by the Fundulea Institute and the specialized agricultural research stations, with the technologies often incorporating suggestions offered by agricultural units.

Under the conditions in 1982, the Fundulea Research Institute for Cereals and Industrial Crops obtained on the entire area under wheat, of 1191 ha, an average production of 6543 kg/ha, and on the area of 737 ha under the Fundulea-29 strain the average production is 7032 kg. On two production farms, over an area of 300 ha under the same strain, the average production was 7645 kg/ha. For barley the average production obtained at the institute in this year was 6493 kg/ha, and for winter two-row barley, the 225 ha yielded an average production of 5970 kg/ha. Great wheat yields were also obtained by many state agricultural enterprises and agricultural production cooperatives on vast areas, specifically in Constanta, Ialomita and Calarasi counties.

The results obtained in research and production prove that the current range of strains can yield high productions even under difficult climatic conditions, like those of this year. We notice that an essential condition for boosting output is maximum capitalization on the genetic potential of the seeds of current strains.

Stressing this is all the more necessary because there still is too great a gap between the productive potential of strains and hybrids used and the way of using production techniques. The biological stock used in our agriculture has equal qualities with those of strains used in countries with productions far greater per surface unit, but, whereas, for instance, in Holland 90% of the production

potential of wheat strains is obtained on an all-country average, in Romania, under 50% is obtained. This shows the great resources for boosting farm output in this country. But the utilization of these resources involves upgrading the style of work at all levels, beginning with workers and machine operators and going as far as research, decision-making and planning organs.

Of course, the difficulties inherent in agriculture are tied not only to the impossibility of monitoring all factors but also to its complex nature, resulting from the fact that agricultural production is a biological process. In this connection, the great Romanian agronomist G. Ionescu-Sisestiu with good reason noted that "in order to achieve the greatest possible success in agriculture.... there is the need for equal cooperation of all factors.... profitability depends on the most unfavorable factor." Practice demonstrates that precisely such a factor -- concretized in different aspects of the activity in agriculture -- limits farm output. For instance, what is the use of having valuable techniques capable of meeting any needs if these are not applied in all units and on an overall basis? One of the causes of this deficiency involves poor organization of work, a fact which largely explains why every year on vast arable areas, plowing and planting of crops are performed with great delays and crop upkeep and harvesting take much longer than the optimal period. There are cases when the chemical fertilizer is applied properly and rotation and manure are disregarded. All this has direct impact on soil fertility, on the increase in per-hectare yield. Facts indicate that if winter plowing is not done on time and is left for spring, on the areas involved production is 30% lower. Moreover, plowing done beyond the optimal period -- and this, unfortunately, has become a practice in many agricultural units -- adversely impacts on soil fertility.

Establishment of organized, disciplined and proficient work in all agricultural units is the paramount condition on which obtaining high per-hectare output hinges. It is indisputable that agricultural units which year by year on vast areas are obtaining 5-6 tons of wheat and 8-10 tons of corn per hectare have a climate of order and discipline, the collectives of machine operators and experts display professional expertise, have a militant attitude for promoting new developments, for utilization of best production techniques.

Furthermore, the requirements of more intensive cultivation overwhelmingly involves research. The input of Romanian agricultural science into promoting more intensive cultivation is an obvious fact. As pointed out by Nicolae Ceausescu at the recent work conference at the CC of the RCP, research must become a vigorous factor with a decisive contribution toward achieving a radical change in our socialist agriculture, developing new varieties of seeds and upgrading existing varieties. Some strains are not sufficiently adapted to the natural conditions of climate and soil in various crop areas; others do not have the required resistance to diseases and pests, to fall and drop. Some strains are not early enough to reach full maturity in cool years. In this regard, the Research Institute for Cereals and Industrial Crops makes efforts to provide an input so that as early as under this five-year plan the strains and hybrids developed or improved may have features such as greater capacity of absorption of nutrients and adaptation to the various pedoclimatic conditions in our agriculture, resistance to diseases and pests.

Optimalization of consumption of natural and chemical fertilizer is a decisive condition for boosting per-hectare output. Fertilizer has increased more than 40% farm



output in Romania, and chemical control of diseases, pests and weeds have also had major inputs, especially after 1970. It is evident that the increase in farm output in this country, like all over the world, after 1950, is mainly due to chemicalization. The natural production potential of soils in Romania, even of the most fertile ones, stands around 2000 kg wheat per hectare (similar levels were also obtained in other countries where such surveys were conducted), which is far below the outputs planned and obtained so far.

Statistical figures from all over the world tellingly prove that the farm output obtained is directly dependent on the amount of fertilizer used. For yield of use of fertilizer, Romania places slightly above the world average. Over the years, Romania's farm output has increased concomitantly with the quantity of fertilizer applied as follows:

<u>Year</u>	<u>Amount of Fertilizer</u>	<u>Production Obtained</u>
1950	6,000 tons	5,149,000 tons
1960	74,500 tons	9,826,000 tons
1970	590,300 tons	10,631,000 tons
1980	1,113,500 tons	20,200,000 tons

It is an evident fact that in using chemical fertilizer the agricultural units have gained ample experience. However, there are rather many cases where, because of insufficient concern of agronomists, chemical fertilizer is not applied on schedule, uniformly and in the scientific, rational proportion required by the crop, in light of the condition of the soil's supply with nutrients and water, the production planned and other specific features. In this context, chemical fertilizer no longer has the maximum effect and the production increase is not the one anticipated.

But timely application of chemical fertilizer does not depend only on the agricultural production units but also on the chemical fertilizer combines. In our view, it is absolutely necessary, for the sake of the national economy, to meet all the needs for phosphorus for grain on 10 October of each year. For instance, it is known that phosphorus fertilizer must be applied in autumn, concomitantly with the basic soil operations, specifically for spring crops that are planted in the first stage. The application, in spring, for cereal crops, of phosphorus fertilizer, regardless of the chemical form, results in the 60-70% drop in the rate of utilization of the active substance in the fertilizer, and this means unsatisfactory utilization of this significant fertilizer, which is in short supply and is produced here on the basis of imported raw material. According to experimental data and results in production, if agriculture receives in August-September this year the amount of 150,000-180,000 tons of  $P_2O_5$ , and this autumn and in the spring of 1983 about 250,000 tons of nitrogen fertilizer, the per-hectare average for wheat and barley for all agriculture could reach a minimum of 4,000 kg.

Of course industry produces all the year round and agriculture uses phosphorus and potassium fertilizers mostly during the July-October period. In this context, there is the need for rationalization of their use. The quantity of about 160,000-180,000 t of  $P_2O_5$  needed for the more than 3 million ha under cereals is top efficient if used in autumn. Because many agricultural units do not receive the required amounts on time, of course, fertilizational cannot proceed on a rational basis and this adversely affects the increase in production.

Scientific research and agricultural practice point out that the essential point in obtaining high and constant outputs of wheat and barley, for instance, involves ensuring the corresponding levels and ratios of fertilizer. During the last decade, the state has made great efforts to expand the fertilizer industry. Nevertheless, the amounts of fertilizer used in Romanian agriculture are not yet up to the level of requirements. The survey of experimental results indicates that for a ton of nitrogen active substance we obtain a crop increase of minimum 6 tons of wheat, and for a ton of nitrogen one obtains on the foreign market \$140-150, while a ton of wheat can be sold for about \$190. It follows that in terms of economic analysis, the use in agriculture of fertilizer up to the level of crop needs results, on the one hand, in maintaining or increasing soil fertility, and, on the other hand, in obtaining high and constant outputs of wheat and barley, while also creating an exportable surplus, implicitly greater incomes in relation to the selling of chemical fertilizer.

Moreover, the rational utilization of fertilizer also has an additional facet. For instance, in the context of the phosphorous rock becoming rarer and costlier, it is necessary to examine the ratio between its direct delivery to agriculture and transformation into superphosphates, a form in which the utilization rate is far greater. This is all the more so because science now does not have solutions to substituting phosphorus in agriculture, a fact which every day makes more acute the crisis that involves this element and the price for fertilizing one hectare, higher and higher.

By and large, utilization with maximum efficiency of fertilizer necessitates applying rational crop rotation, where leguminous plants (which do not use nitrogen fertilizer but, on the contrary, add nitrogen to the soil) have the necessary input. Finally, we must take into consideration the use of organic fertilizers in fertilization. Among other advantages, organic fertilizers have an equivalent input of 45 kg/ha of nitrogen and 15 kg/ha of phosphorus, to this being added another 20 kg/ha of nitrogen resulting from the intensified fixation of this element by bacteria.

Recent years have seen measures taken to switch from a purely mineral fertilization to the stage of organic-mineral fertilization, capable of greater productions with lower energy consumption in the context of considerably greater soil fertility. In order for the method to be used on an overall scale it is necessary to design and turn out machines for composting and field application of organic fertilizers.

Hence, modern agriculture uses important means and large amounts of energy. This results in great responsibilities for workers in agriculture in terms of best possible utilization of existing resources. In this area, reducing loss in harvesting, transportation and storage is an important factor in boosting the outputs of cereals and industrial crops. A FAO statistical survey shows that this loss in developing countries amounts to 30% of the harvest obtained, that is from a completed plant production, which required human efforts, fuel, and fertilizer and also the loss of a part of the natural fertility of the soil, a part which can be recovered by great effort and over a long period of time. Of course, complete elimination of these losses, which are the most irrational ones in the entire process of food production, involves resolution of a number of problems (an adequate number of machines, roads of access, drying and storing facilities). But a significant reduction in these losses can be obtained by local organizational measures. For instance, corresponding adjustment of combines in cereal harvesting alone avoids losses of about 500 kg/ha, which for an area of 2 million ha under wheat and 800,000 ha under barley in Romania

means a surplus of 1 million tons of wheat and 400,000 tons of barley in silos. Moreover, perfect sealing of cereal transportation facilities also avoids losses of about 200 kg/ha, all this only requiring effort in terms of responsibility.

Upgrading the quality of work in all agricultural units is inextricably tied to the full capitalization on the results of research by their use in production on an overall scale. This highlights the great importance of flawless operation of the system of transfer of know-how and information in production. This is all the more necessary because, presently, only a part of the amount of knowledge accumulated is actually applied and the number of agricultural units that properly use the results of research is still low. In not a few agricultural units many essential facets of the technologies developed by research are not used correspondingly, such as crop rotation, performance of basic operations, fertilization, control of diseases, pests and weeds.

Such a situation points to unsatisfactory involvement of scientific workers and of those in higher education in the system of transmitting and participating in application in production of the scientific advances. Of course, we cannot overlook the responsibility of experts in agricultural units in the application of the techniques that are newly developed by research, because the duty of each specialist in production involves organizing production processes on the basis of modern technologies, concomitantly with systematically monitoring the way in which these technologies ought to be applied in light of specific conditions.

As underlined by Nicolae Ceausescu at the recent work conference, agriculture has suffered as a result of long neglect in terms of upgrading the technical, professional level of the peasantry, of machine operators. That is why scientific workers, teachers in higher education and experts in agricultural units must continuously work for the use on an overall scale of modern technologies in large-scale production, by organizing demonstration plots on large areas in state agricultural enterprises and in agricultural cooperatives.

Complete application of the results of research in production can be only the outcome of the efforts of all specialists, whether they work in the research institute, in stations, in education, in state administration or in the production unit. Whatever the level of their job or the sector of their activity, all specialists have the professional duty to constantly work so that the results in production may be upgraded to the level of those obtained in research. In the same context is the enhancement of the professional expertise of specialists in central and county agricultural organs, whose assignments include transmission of scientific recommendations into production. This requirement is all the more urgent because today, as a result of scientific activity, there is an increase in the area of upgrading production techniques by developing new methods and approaches, new strains and hybrids evolve and the entire agricultural technology is modernized and diversified. Knowledge of these accomplishments, based on permanent contact with research, provides the favorable framework that permits experts in agricultural units to substantiate the decisions that are made to upgrade production processes.

The systematic study of the results of research provides an inexhaustible source of creativity, stimulating the search for new approaches. The shortcomings in this area partly explain why in the studies to develop new strains and hybrids the research cycle still takes too long and the testing period for approval still is long, facts

which result in lesser efficiency. Sometimes in agricultural research overlooked were some modern investigative methods which permit the obtaining of results in a short period of time and which assure prompt and efficient use of the results in production. This largely explains the slow rate at which achievements in genetics, physiology and biochemistry have been and are being applied in the activity of developing new plant strains and hybrids. Furthermore, in spite of the good results that were obtained in evolving varieties of hybrids, large-scale production has insufficiently benefitted from the support of research workers, because in research there was long the erroneous concept that activity concluded with the approval of the strains and technologies. Consequently, from the amount of knowledge accumulated on the basis of a long research work, only a small part was applied in production, with the number of agricultural units that satisfactorily utilize the recommendations of research being still too small. It is not accidental that some agricultural units are every year obtaining high outputs and others have poor results, under similar pedoclimatic conditions, as also technical-economic conditions for application of technologies often are similar.

The greater input of research in the development of agriculture involves a large array of problems, and prominent among them are evolving new strains, improving existing ones and producing highly productive seeds and nursery stock. Hence, the Research Institute for Cereals and Industrial Crops must further tackle topics of major importance.

By a better and better organization of the work process, by strict compliance with all the technological links at the level of the technical-material base of agriculture, it is possible to obtain higher cereal yields, in step with the requirements of a highly-efficient agriculture.

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CSO: 2700/44

## YUGOSLAVIA

## TRADE WITH SOUTHEAST AFRICAN COUNTRIES, 1981-82

## Zambia Leads

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 7 Dec 82 p 3

[Article by Zarko Arsic: "More Was Exported Than Imported"]

[Text] Goods with a value of \$1,089,000,000 were delivered to developing countries during the first 6 months of 1982, a figure which, when compared with the same period in 1981, is approximately 28 percent larger. Yugoslavia imported \$1,076,609,000 worth of goods from these countries, which is 20 percent less than during the first 6 months of 1981.

With respect to overall imports from the developing African countries south of the Sahara, the southeast African country of Zambia, with 20 percent of the total, holds a significant place, followed by Tanzania and Angola, although the latter have much lower percentages. The volume of imports from the remaining developing countries of southeast Africa is very low and hovers around one percent or less.

Table 1. Percentage of Participation of Southeast African Countries in overall Trade between Yugoslavia and all the Developing Countries South of the Sahara (figures in thousands of U.S. dollars)

<u>Country</u>	<u>1981</u>	<u>%</u>	<u>1982</u>	<u>%</u>
Total	321,837		353,078	
Angola	23,261	7	7,308	2
Kenya	2,951	1	1,903	1
Lesotho	636	-	360	-
Madagascar	1,702	1	4	-
Mauritius	3	-	11	-
Mozambique	258	-	4	-
Seychelles	5	-	-	-
Somalia	5	-	40	-
Sao Tome and Principe	-	-	-	-
Swaziland	8	-	-	-
Tanzania	13,869	4.3	6,045	2
Uganda	1,218	0.3	144	-
Zambia	49,598	15	54,855	16
Zimbabwe	2,418	1	1,784	1

Table 2. Actual Exports and Imports Vs. Planned for First 6 Months of 1982  
(figures in thousands of U.S. dollars)

<u>Country</u>	<u>Exports</u>			<u>Imports</u>		
	<u>Actual</u>	<u>Planned</u>	<u>%</u>	<u>Actual</u>	<u>Planned</u>	<u>%</u>
Zambia	23,045	30,300	76	31,810	50,000	64
Uganda	1	8,000	-	143	5,000	3
Tanzania	581	15,000	4	5,464	15,000	36
Kenya	505	7,000	7	1,398	7,000	20
Angola	3,574	48,000	7	3,734	20,000	19
Zimbabwe	25	7,000	0.4	1,759	12,000	15

Using the above information, comparing the first 6 months of 1982 with the same period in 1981, it can be seen that overall trade volume increased solely with Zambia, and only by one percent in relation to overall trade with all the developing countries south of the Sahara. The trade relationship with Kenya and Zimbabwe remained the same at one percent while with the remaining countries, the percentages are in significant decline.

Exports and imports, in relation to the plan, are compared only for six countries--Yugoslavia's chief trading partners in the region. Based on the preceding information, it can be seen that actual exports during the first 6 months of 1982 fell far short of the 1982 export plan. Only exports to Zambia achieved more than 50 percent of the plan, while the highest level of exports achieved with the remaining countries was 7 percent of the planned volume for the entire year(1982).

#### Unrealistic Planning Concepts

The situation is more favorable regarding the achieved volume of imports: 64 percent of planned imports from Zambia were purchased and imports from the remaining countries range between 3 and 36 percent of the plan. The information paints an unfavorable picture of our exports in relation to imports from the region of developing countries of southeast Africa. Room for discussion certainly exists, however, concerning the unrealistically formulated planning concepts and export-import relationships with some countries of the region: Zimbabwe, Uganda, Tanzania and others.

During the first 6 months of 1982, Yugoslavia exported to the developing countries goods worth a total of \$1,089,000,000 which, in comparison with the same period last year when our exports to these countries amounted to \$844,554,000, is approximately 28 percent more. During the same period, Yugoslavia imported from the developing countries goods worth \$1,076,609,000. Compared with the same period last year when we imported from these same countries goods totaling \$1,343,875,000, this amount is 20 percent less.

All of the developing countries of Africa south of the Sahara (more than 40) participated in this trade, buying 18 percent of Yugoslavia's overall exports to developing countries and, in the first half of 1982, selling to Yugoslavia 15 percent of its imports from developing countries. During the same period in 1981 this relationship was significantly less balanced: These countries

imported 7 percent of all Yugoslav exports to developing countries while selling to Yugoslavia 19 percent of all imports from developing countries.

The developing countries of southeast Africa, during the first 6 months of 1982, purchased 14 percent of total Yugoslav exports to developing African countries south of the Sahara, while last year this percentage was almost 5 times larger (61 percent). The relationship between last year's and this year's figures for Yugoslav imports from this region has lower and more even percentages: 28 percent for 6 months of 1982 versus 22 percent of the same period in 1981.

#### Unfavorable Ratio of Exported to Imported Items

Yugoslavia mainly exports various industrial products, semi-manufactures and processed goods of raw materials derived from agricultural, animal and mineral sources. Actually, we export mostly industrial equipment and machines, papers, means of transportation, chemical products, ready-made clothing and industrially processed food products; and we import coffee, cotton, sisal, leather, asbestos and copper. From Zambia we import mostly unrefined copper, from Kenya coffee and from Tanzania sisal. Yugoslavia exports seven industrial products to Zambia and imports only two products. With Tanzania, this ratio is 8 to 1; with Kenya 7 to 3 and with Angola, 23 to 4. This ratio between exported and imported items, obviously, points to the low level of diversification of imports from countries in this region as well as to the lopsidedness of their economies and their insufficiently developed industrial production.

A large number of Yugoslav enterprises are working with the countries of this region. These firms trade, that is, export and import or are involved in carrying out numerous investment projects and offer both overland and water transport services. Our organizations work directly with these countries or through local offices and joint enterprises. The following firms, among others, are particularly prominent in dealings with this region: Energoprojekt, Emona, Agrovodina, Energoinvest, Put-Sap Jugoeexport, Fap-Famos, Unioninzenjering, PKB and Partizanski Put. The firm Zecco in Zambia, a joint enterprise of the Zambian government and Energoprojekt which manufactures industrial products, is one of the first joint enterprises founded by Yugoslavia in the developing countries. Two Yugoslav banks operated in this region through local offices, chiefly to provide informational services: Ljubljanska (Nairobi) and Beogradska Udruzena Banka (Zimbabwe-Harare). Also, the Yugoslav Chamber of Commerce has three offices in the region: in Kenya, Zambia and Angola.

#### Zambia State Farm

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 8 Dec 82 p 3

[Article by Zarko Arsic: "We Cannot Be Satisfied With the Volume of Trade"]

[Text] The construction of a state farm in Zambia is an important test for Yugoslav businessmen, especially for workers of the PKB collective, Belgrade.

On the basis of the export-import data, i.e., results achieved during the January to July period this year, corrections were made in proposals for projected exports from our economy to individual countries in the southeast African region.

Table 1. Yugoslav Exports for the First Seven Months of 1982 and Projected Exports for 1983 (in thousands of U.S. dollars)

<u>Country</u>	<u>Exports</u>	
	<u>7 months 1982</u>	<u>Projected 1983</u>
Angola	4,673	40,000
Kenya	550	5,000
Lesotho	-	100
Madagascar	188	500
Mauritius	11	300
Mozambique	330	1,000
Seychelles	-	100
Somalia	48	1,000
Sao Tome and Principe	-	2,000
Swaziland	-	3,000
Tanzania	1,116	10,000
Uganda	1	4,000
Zambia	23,261	40,000
Zimbabwe	25	5,000
Total	30,203	112,000

With respect to its importance for the further course of our economic stabilization, and according to the trade figures for the first 7 months of 1982 on exports to a number of developing countries of southeast Africa, Yugoslav exports have registered a significant rise in percentages. This rise is particularly pronounced in trade with Kenya, Mauritius, Somalia and Zambia. This growth, however, is only significant in our trade with Zambia because, with the other countries, the base for comparison is very low. Meanwhile, as for the countries with which, heretofore, we developed the greatest share of trade in the region (Angola, Tanzania, Zimbabwe, Uganda), exports have fallen between 70 and 90 percent.

#### Rewards Must Depend on Business Results

Actual exports to the Region, except for those to Zambia, will depart significantly from the 1982 export plan, which means that it was made overly ambitious, without a realistic appraisal regarding our possibilities. Based on the trade data from previous months and, it appears, also on estimates of our exports until the end of 1982, we must make significant corrections and approach the boundaries of reality. Judging by trends so far this year, we cannot be satisfied with our business dealings with the developing countries of southeast Africa especially regarding our exports to the countries of this region. Although it is true that up until now we have attained many positive results of mutual benefit through bilateral cooperation with many countries of the region, it is just as true that these results are still not a genuine indication of both our and their possibilities and needs. This is so because the possibilities, especially in the area of economic cooperation, are indeed numerous and practically inexhaustible. They extend to all areas of economic life.



One of the fundamental measures necessary for greater exports is that more favorable financial terms be granted in credits for export items, especially when exports of equipment are at issue. Next in importance come competitive prices, delivery times, a constant presence in the markets of these countries, a diversification of our offerings, as well as the involvement of Yugoslav consulting organizations in the countries of the region. Necessary too is greater and more serious deliberation in these countries on the subject of joint ventures, as well as an actual choice of expert personnel--specialists--who know the business of trade and joint investments and who also know the languages which are important for success in these endeavors (primarily English). It is also necessary to introduce a more correct system of rewards depending on business results and to employ to a greater degree experts and workers from the countries in which the work is being done. We must invest greater efforts, more knowledge and more capital in the rational development of our firms in this area (with full or limited ownership).

It is inadmissible that some experienced Yugoslav firms, for almost 20 years, have been operating with two or more than five to six workers with a small turnover, and have not been endeavoring to diversify their business: Inter-export (Lusaka, Zambia); Aprimex (Nairobi, Kenya) and others. Aprimex, a joint firm of Emone and Jugotekstila (Ljubljana), up until now, primarily has purchased coffee, sisal, cotton and tropical fruit from Kenya for sale in Yugoslavia. It is necessary to strive, with more effort and involvement, to link imports from individual countries to Yugoslav exports. This must be done first of all with Zambia, Zimbabwe, Tanzania, Kenya and Angola. If Yugoslav payments on its imports from these countries were linked to its collecting monies owed from exports, we would then, certainly, have far fewer difficulties collecting monies owed by our trading partners among countries in this region. If we were to do this we probably would not become involved in a situation such as what has happened heretofore with Zambia, from which, for a long time, we have been unable to collect payment on a significant sum owed to us.

#### State Farm in Mtrizi

For many years, Zambia has been struggling to diversify its economy and to develop also some other areas of its economy, especially the agricultural area, where it has the greatest potential. By doing this, in actuality it is striving to free itself of the well-known negative consequences of lopsided (single-product) production, in this case the production of a large quantity of copper (primarily ore and semi-manufactures). Almost all of the country's foreign currency income depends on the sale of copper, which is negatively influenced by large price fluctuations on the world market. For more than 2 years the price of copper has been very low. Zambia is having difficulties enduring these losses. Last year, the mines were operating at a loss because the producer price of copper was higher than its sale price on the London market for rare and precious metals. For this reason, Zambia must find other areas of economic potential, and now, this is in agriculture. And in Zambia these potentials are greatest.

In connection with these developmental concepts within the framework of the Third National Developmental Plan, President Kaunda announced a special food

production program (Operation Food Production). Within this framework provisions are made for the creation of a certain number of state farms with the help of individual friendly countries. In actuality, with respect to the form of ownership, size and method of exploitation, this program makes more precise arrangements for the formation of many types of farms: large commercial state farms; redesigned village cooperatives; Z.N.S. (Zambian National Service); producer cooperatives; family farms in villages and private commercial farms. On this basis, in 1981, within the framework of the Yugoslav agricultural delegation, representatives of PKB (Belgrade) chose Mtrizi in the eastern province as the most favorable site for constructing a state farm. A study is underway and the first 200 hectares are being cleared. Quickening the pace of construction of this farm also has great political significance for Zambia. There are many opponents to the government's plan to found state farms. These opponents are primarily the Western countries which also refused to participate in constructing such farms. Within the country, too, there are powerful opponents, not only against this action, but also against other, similar, programs which are imbued with some type of socialistic idea. Government representatives desire that the Yugoslav farm should be an example of successful cooperation. Farm construction, certainly, is one more important test of Yugoslav businessmen which is of consequence for influencing the course of our future cooperation and business reputation not only in Zambia but also in the other countries in that region of Africa. This is especially important because the countries of southeast Africa are working intensely on establishing a united market which should rapidly contribute to reciprocal economic linkages, greater growth and more intensive reliance on their own forces, and more universal and more successful liberation from the influence and economic pressures of the numerous branch offices of multinational corporations from the industrially developed countries, particularly Great Britain, South Africa, the United States and Japan.

12192

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## DATA ON OIL REFINERY PRODUCTION IN 1981

Zagreb NAFTA in Serbo-Croatian No 9, Sep 82 pp 495-498

[Article by Vilim Boranic]

[Text] The operations of oil refineries was even more complicated in 1981 than in the preceding year, because the reduced imports of crude oil were irregular and untimely, while further price increases of crude oil, supplementary and reproduction materials, as well as controlled prices for finished products, had a negative impact on operational economics.

According to preliminary available data on refinery operations of the General Association of Petroleum Processing Organizations of Yugoslavia for 1981, an analysis has been prepared of petroleum processing as a whole, without entering into specific problems of individual refineries.

It should be noted that in some categories the data for 1980 differ from those published in NAFTA, No 32 (Jun 81) pp 286-289, for they were of a preliminary nature at that time as well.

In 1981 a total of 13,401,000 tons of crude oil were processed, compared to 14,797,000 in 1980, representing a decrease of 1,391,000 tons, or 5.7 percent. The quantity of processed oil at 13,401,000 tons was less than that processed in 1977, when 13,835,000 tons were processed. In 1979, 15,821,000 tons were processed, representing the highest production record; since then crude oil processing has been declining.

Other than available quantities of domestic oil, the refineries also processed imported oil. The influx of imported oil was not only reduced, and that only partially for financial reasons, but it was also irregular, so that at times it was necessary to ration certain amounts of finished products. In 1981 10,163,000 tons of crude oil were imported, compared to 10,609,000 tons in the preceding year. Imported oil was distributed according to the contracts of the refineries, while domestic oil was processed by refineries that were favorably located near the oil fields.

Capacity for primary crude oil processing totaled 25.5 million tons in 1981, so that on the average that capacity was only 52.6 percent utilized.

In 1980 utilization was at 58 percent of capacity. That poor use of capacity for primary petroleum processing had a crucial impact on use of secondary processing capacities, that is, on use of installation capacity where the products of primary refining are processed and perfected, and naturally as well on the economics of the overall refinery operations.

Table 1 shows the production of major groups of products, which as heretofore have been grouped according to features of processed petroleum, then according to market uses. These categories vary greatly in the winter months as opposed to summer. The table shows separate categories for production for the market, internal use by refineries and processing losses.

Table 1. Yields of Oil Refining and Product Types in Yugoslavia

(1) Proizvod	1980		1981		(2) Indeks
	10 <sup>3</sup> t	%	10 <sup>3</sup> t	%	
(3) Motorni benzin	2 218	14,4	2 079	15,5	93,7
(4) Gorivo za ml. motore i petrolej	334	2,2	305	2,3	91,3
(5) Dizel gorivo, ulje za loženje za domaćinstva i ekstra lako ulje za loženje	4 022	26,1	3 536	26,3	87,9
(6) Ulje za loženje	4 687	30,4	3 852	28,7	82,2
(7) Bitumen	643	4,2	581	4,3	90,4
(8) Primarni benzin	1 030	6,7	659	4,9	64,0
(9) Ostali proizvodi	1 264	8,2	1 284	9,5	101,6
(10) Ukupno za tržište	14 198	92,2	12 296	91,5	86,6
(11) Vlastita potrošnja	951	6,2	920	6,8	96,7
(12) Gubici prerade	250	1,6	223	1,7	88,9
(13) Preradena nafta i dodaci	15 399	100,0	13 439	100,0	87,2

Key: 1. Product	7. Bitumin
2. Index	8. Primary benzine
3. Gasoline	9. Other products
4. Fuel for jet engines and kerosene	10. Total for the market
5. Diesel fuel, domestic heating oil and extra-light heating oil	11. Internal consumption
6. Heating oil	12. Processing losses
	13. Processed petroleum and additives

As the table shows, in 1981 the total processed petroleum and additives was 13,439,000 tons, compared to 15,339,000 in 1980, or fully 2 million tons in the preceding year, representing a 13.4 percent drop. The share of production for the market in total processing was 91.5 percent in 1981, compared to 92.2 percent in 1980. The shares of individual products in 1981 did not differ markedly from those of 1980. The greatest differences were in gasoline, where the percentage grew from 14.4 to 15.5 while heating oil fell from 30.4 to 28.7 percent. Also declining was the share of primary benzine (4.9 percent compared to 1980's 6.7 percent), while the share of so-called other products grew from 8.2 to 9.5 percent.

Production of gasoline amounted to 2,079,000 tons in 1981, compared to 2,218,000 tons in 1980, representing a decrease of 139,000 tons or 6.3

percent. Yet since a smaller total amount of crude oil was processed, the share of gasoline in total production grew from 14.4 percent in 1980 to 15.5 percent in 1981. That increase in proportion came partly at the expense of primary benzine production which fell from 6.7 percent of the total in 1980 to 4.9 percent in 1981. Absolute figures for that product were 1,030,000 tons in 1980 and only 659,000 tons in 1981, or 36 percent less.

Production of jet engine fuel and kerosene declined in 1981 by 8.7% compared to 1980; in 1980 334,000 tons were produced, while in 1981 the figure was 305,000 tons, or 29,000 tons less. Their share of total production grew from 2.2 to 2.3 percent.

The group called intermediate distillates, eg., diesel fuels, heating oils and extralight heating oils, accounted for 3,536,000 tons of production in 1981, which was 486,000 tons less than the 1980 production of 4,022,000 tons, or 12.1 percent less. Their share of total production, however, grew insignificantly from 26.1 to 26.3 percent (because of variations in total crude oil processed).

Production of residual-type heating oil, so-called mazut, amounted to 3,852,000 tons in 1981, compared to 4,687,000 tons in 1980. This was 835,000 tons or 17.8 percent less than the 1980 total; its share in total processed petroleum fell from 30.4 percent in 1980 to 28.7 percent in 1981. Next to the 36 percent decline in primary benzine production, the fall in heating oil production by 17.8 percent is the greatest decline, since the decline in production of other product categories was lesser.

Asphalt or bitumen production also suffered a decline, of 9.6 percent compared to 1980, when 643,000 tons were produced. In 1981 total production was 581,000 tons, or 62,000 tons less. Its share in total processing was essentially the same in 1981 as in the preceding year, that is, 4.3 percent in 1981 compared to 4.2 percent in 1980.

Production of other products, such as liquid propane, special benzines, white spirit, aromatics, lubricants, paraffin and petroleum coke amounted in 1981 to a total of 1,284,000 tons, compared to 1,264,000 tons in 1980, thus showing an increase of 1.6 percent or 20,000 tons. For this reason their share of total consumption increases from 8.2 to 9.5 percent. In sum, while smaller total amounts of crude oil were processed in 1981, the refineries managed to produce generally larger amounts of higher quality products.

Internal consumption by the refineries decreased in 1981 by 31,000 tons; from 951,000 tons in 1980 to 920,000 tons in 1981, or by 3.3 percent. On the other hand, the share of this consumption in total processing grew from 6.2 to 6.8 percent. Taking the low utilization of capacity into account, and the irregularity of deliveries, the 6.8 percent figure for internal consumption can be regarded as favorable. A similar status is true for processing losses, which despite all the difficulties surrounding crude oil processing fell from 250,000 tons to 223,000 tons, dropping

Table 2. Proportions of Principal Petroleum Processing Products

Key: 1. Product group  
2. Index  
3. Gasoline  
4. Intermediate distillates  
5. Residual products  
6. Other products and losses  
7. Processed petroleum and additives

Grupa proizvoda (1)	1980		1981		(2) Indeks
	10 <sup>3</sup> t	%	10 <sup>3</sup> t	%	
Energetski proizvodi (3)	12 212	79,3	10 692	79,6	87,6
Neenergetski proizvodi (4)	3 187	20,7	2 747	20,4	86,2
Prerađena nafta i dodaci (5)	15 399	100,0	13 439	100,0	87,2

Table 2 shows relationships in production of four groups of products: gasoline and primary benzene; intermediate distillates, such as jet engine fuel and kerosene, diesel fuel, domestic heating oil and extra-light heating oil; residual products, i.e., heating oil together with internal refinery use and asphalt; and other products and losses.

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2 years, at 28.3 percent in 1980 and 28.6 percent in 1981. In percentage terms the greatest variation came with "other products," even though the absolute difference was only 7,000 tons; their share of total production in 1980 was 9.8 percent, but in 1981 it rose to 11.2 percent.

The picture appears somewhat different when the production data are divided into energy and non-energy categories. That is presented in Table 3, where the distribution is the following: energy products, including gasoline, intermediate distillates, and heating oil for internal use; and non-energy products, such as primary benzene, asphalt, other products and losses. That table suggests the following conclusions:

In 1981 the refineries processed 1,960,000 tons less crude oil. The flow to the refineries was irregular, which hampered operational continuity of facilities for primary processing and caused irregular utilization of secondary processing facilities.

Because of the divergence between refinery production and demand, particularly for energy-type products, production of non-energy products was somewhat less in terms of percentage in 1981 than in 1980.

To be specific, in 1980 the share of non-energy products was 20.7 percent, while in 1981 it was 20.4 percent. The absolute quantities of non-energy products totaled 3,187,000 tons in 1980, and 2,747,000 tons in 1981, or 440,000 tons (13.8 percent) less.

Production of energy products, which were almost constantly in short supply on the market, fell from 12,212,000 tons in 1980 to 10,692,000 tons in 1981, representing a drop of 1,520,000 tons or 12.4 percent.

The share of energy products in total production increased insignificantly, from 79.3 percent in 1980 to 79.6 percent in 1981.

Although in 1981 the refineries worked under extremely difficult conditions, they still accomplished their lasting objective of maintaining the quality of their products at the high level already achieved, in accordance with the requirements of consumers. Besides that, they strove by their work to hold atmospheric pollution to the lowest possible level.

Other than in crude oil processing, 1981 was also difficult for the refineries in the area of expanding final processing, so that because of their financial situation the construction of several new facilities by the refineries was slowed, and the schedule for their initial operations in regular production set back.

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CONSUMPTION OF OIL PRODUCTS IN 1981

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[Article by Vojtjeh Brajcic]

[Text] Last year the Yugoslav market for petroleum derivatives saw significant new price increases, but those prices were unable to limit consumption to the bounds of reduced available quantities of derivatives.

The prices for petroleum derivatives grew by a nominal 45-75 percent compared to the preceding year. If we correct this value by the overall growth rate in consumer prices, we see an actual price rise for gasoline of 14 percent, the same for diesel fuel, 21 percent for domestic heating oil and 35 percent for heavy heating oil. (Table 4).

With a fluctuation coefficient for gasoline of 0.3, it would be realistic to expect a decline in consumption per vehicle of 5 percent, which in general did occur.

Consumption per private vehicle, excluding consumption of other vehicles and foreign private cars, amounted to 643 kg in 1981, compared to 688 in 1980. Compared to the last pre-crisis year of 1973, when consumption per vehicle was 929 kg, this decrease amounts to 31 percent. In this manner Yugoslavia has found itself at the bottom of the scale in average per vehicle consumption among European countries.

According to data of the Federal Statistical Office, 241,000 cars were produced in Yugoslavia in 1981, of which about 35,000 were exported, while about 30,000 were imported. If we take attrition of old vehicles into account, we can estimate that there were about 2,570,000 private cars registered in Yugoslavia in 1981, compared to 2,341,000 cars the previous year, representing only a 5.7 percent increase.

The Yugoslav border was crossed by 8.1 million foreign vehicles in 1981, compared to 7.8 million in 1980, representing a 4 percent increase.



The number of foreign tourists increased by 3 percent, while the number of overnight stays by foreign tourists grew by 8 percent. Gasoline sales in this sector grew by about 3-4 percent, and it is estimated to account for about 300,000 tons or 14 percent of total gasoline consumption in Yugoslavia.

In 1981 a total of 2,147,000 tons of gasoline was sold, compared to 2,118,000 tons in 1980, a 1 percent increase.

A restriction on consumption also resulted from prices for domestic heating oil, which rose from 9.93 dinars per kg in 1980 to 15.53 dinars in 1981, a 56 percent increase. The real price increase corrected for overall inflation amounted to 21 percent.

With a fluctuation coefficient of about 0.4 in this case, a decline in consumption of about 10 percent could have been expected, at least as far as retail consumption, which accounts for about 70 percent of consumption of this derivative. On the average, considering that the prices had no marked effect on a decline in consumption in the social sector, it would have been realistic to expect a decline in extra-light heating oil consumption of 5 percent. The actual drop in consumption, however, was 12 percent, which certainly contributed to the constant shortages of this product, especially during the season of most use. The total consumption of extra-light heating oil in 1981 amounted to 1,490,000 tons, compared to 1,695,000 tons in 1980.

Table 1. Production of Petroleum Products in Yugoslavia

(000 tona)

Artikli (a)	1978.	1979.	1980.	1981.	(b) Index		(c) Struktura	
					80/79	81/80	1980.	1981.
1. Primarni benzin	172	272	424	602	156	142	1,6	4,1
2. Aviobenzin	16	18	18	18	100	100	0,1	0,4
3. MB 86 oct.	588	572	506	516	88	102	3,4	3,6
4. MB 98 oct	1.746	1.757	1.612	1.625	92	101	10,6	11,2
Ukup. mot. ben. (3 + 4) (d)	2.334	2.329	2.118	2.141	91	101	14,0	14,8
5. Spec. benzin i white spirit	69	70	64	78	91	122	0,4	0,5
6. Petroleji i MG	318	345	251	339	102	97	2,1	2,3
7. Dizel gorivo	2.693	3.005	2.949	2.846	98	97	18,0	19,6
8. Ekstra lako i spec.	1.777	1.797	1.695	1.490	94	88	10,8	10,3
Ukup. plin. ulja (7 + 8) (e)	4.470	4.802	4.644	4.326	97	93	28,8	29,9
9. Loživo ulje	6.391	6.862	6.293	5.355	92	85	42,4	36,9
Bez vlastite potroš. (rafinerija) (f)	5.746	6.373	5.785	4.671	91	81	—	—
10. Bitumen	643	785	638	613	81	96	4,7	4,2
11. Motorna ulja	109	114	111	110	97	99	0,7	0,8
12. Industrijska ulja	226	247	254	298	103	117	1,5	2,0
13. Industrijske masti	9	10	10	10	100	100	0,1	0,1
14. Parafini	9	10	11	14	110	127	0,1	0,1
15. Plin	414	413	392	436	95	111	2,5	3,0
16. Ostalo	144	107	179	(180)	167	100	1,0	1,0
SVEUKUPNO (g)	15.324	16.383	15.507	14.530	95	94	100	100
Energetska potroš. (h)	14.944	14.749	13.816	12.625	94	91	90,0	86,9
Neenergetska potroš. (i)	1.380	1.634	1.691	1.905	103	113	10,0	13,1

(j) Podaci o prodaji članica poslovnih zajednica »Nafta«, Zagreb i »Petrolunion«, Beograd.

NAPOMENA: 1. Uključena vlastita potrošnja rafinerija i bunker brodova i aviona

2. U motorne benzine uključen je MB 86 oct. i MB 98 oct.

3. Za grupu »plinska ulja« osim dizel goriva uključeno je ekstralako loživo ulje za domaćinstvo i specijalno loživo ulje za industriju

4. U »loživo ulje« je uključeno lako, srednje i teško loživo ulje

5. U »ostale derivate« uključeni su aromati, petrol-koks i dr.

6. U zagradi ocjena

Key: a. Product

b. Index

c. Structure

1. Primary benzine

2. Aviation fuel

3. 86 octane gasoline

4. 98 octane gasoline

d. Total gasoline (3 + 4)

5. Special benzine and white spirit

6. Kerosene and jet fuel

7. Diesel fuel

8. Extra-light and special oil

e. Total diesel-type fuels (7 + 8)

9. Heating oil

f. Production of refineries without internal use

10. Asphalt

11. Motor oils

12. Industrial oils

13. Industrial lubricants

14. Paraffins

- |                       |  |
|-----------------------|--|
| 15. Gas               | i. Non-energy consumption  |
| 16. Other products    | j. Data on sales from members of the NAFTA commercial association, Zagreb, and the PETROLION association, Belgrade |
| g. TOTAL              |  |
| h. Energy Consumption |  |

- Note:
1. Figures include internal consumption by refineries, tankers and airplanes.
  2. Motor fuels or gasolines include 86 octane and 98 octane fuels.
  3. The group "liquid fuels" includes diesel fuels along with extra-light domestic heating oil and special industrial heating oil.
  4. "Heating oil" includes light, medium and heavy heating oil.
  5. "Other derivatives" includes aromatics, petroleum coke, etc.
  6. Bracketed figures are estimates.

Nominal prices for diesel fuels rose by 47 percent last year, while the real adjusted price increase was about 14 percent. With a fluctuation coefficient of 0.1, a decline in consumption of up to 2 percent was anticipated. The actual decline was 3 percent.

The number of trucks in 1981 increased by 17,450 vehicles produced domestically and about 3,000 imported vehicles. The number of tractors grew from 297,000 in 1980 to about 325,000 in 1981.

The activity of highway traffic in 1981 held the same share of total travel as in the preceding year; it totaled 45.9 billion passenger kilometers. Cargo traffic in 1981 amounted to 21.5 billion ton-kilometers, compared to 20.9 billion in 1980 or 3 percent higher. All of these data together combined in terms of consumption brought total use of 2,846,000 tons in 1981 compared to 2,949,000 tons in 1980, or 3 percent less.

Prices for mazut in 1981 grew nominally by 74 percent from 4.62 to 8.03 dinars per kilogram. A more significant impact on consumption of this heavy oil came from chronic shortages, combined with a relatively favorable hydrological situation in the beginning of 1981, which made possible significant savings of mazut at thermoelectric power plants.

In the same way, last year saw increased consumption of natural gas compared to 1980 by some 850 million cubic meters, which objectively could replace 800-900,000 tons of mazut. This factor also contributed to a reduction in consumption of heating oil in Yugoslavia.

Under these circumstances, mazut consumption in 1981 was reduced to 5,355,000 tons, compared to 6,293,000 tons in 1980.

Less asphalt was also used in 1981 than in the preceding year. A total of 613,000 tons for 1981 compared to 638,000 tons in 1980 represents a 4 percent reduction.

Motor oil sales totaled 110,000 (tons?), a 1 percent decline. The share of motor oils in gasoline and diesel fuel figures continues to decline, amounting in 1981 to only 2.2 percent. This figure is approaching the normally expected percentages of developed countries (1.7-1.9 percent).

Industrial oils and lubricants accounted for 308,000 tons, or 17 percent more. Sales of jet fuel fell by 3 percent from 351,000 to 339,000 tons. Unfavorable prices and shortages of this product had a significant impact on consumption by foreign airlines.

Shortages of liquid gas on the domestic market were felt particularly in winter months, but the total sales were still 436,000 tons, or 11 percent more than the preceding year.

In 1981 the Yugoslav market consumed a total of 14,530,000 tons of petroleum derivatives, compared to 15,507,000 tons in 1980, or 6 percent less (Table 1).

Table 2. Imports of Oil Products Into Yugoslavia (1,000 tons)

(2) (u 000 tona)

Proizvod (1)	1978.	1979.	1980.	1981.	Index	
					81/80	81/78
Plinsko ulje (3)	219	106	201	85	42	38
Ulje za loženje (4)	961	1.015	695	824	119	86

(5) (u mil. din)

Plinsko ulje (6)	504	532	1.779	703	40	140
Ulje za loženje (7)	1.478	2.474	3.530	4.559	129	308

(8) Prosječna cijena u din za kg

Plinsko ulje (9)	2,30	5,02	8,85	8,27	93	360
Ulje za loženje (10)	1,53	2,44	5,08	5,53	109	361

IZVOR: Index 2/82 SZS Beograd

- Key:
- |                                  |   |
|----------------------------------|---|
| 1. Product                       | 6. Liquid gas                           |
| 2. Index                         | 7. Heating oil                          |
| 3. Liquid gas                    | 8. Average price in dinars per kilogram |
| 4. Heating oil                   | 9. Liquid gas                           |
| 5. Imports in millions of dinars | 10. Heating oil                         |

Source: Index 2, 1982, Federal Statistical Office, Belgrade

Certain changes were also recorded in the consumption pattern. The largest share continued to be heating oil, with 36.9 percent, but that was markedly less than in 1980, when mazut accounted for 42.4 percent of consumption. That share still remains above the capacity of Yugoslav refineries, which last year amounted to about 32 percent. The difference is covered by imports, which amounted to about 824,000 tons (Table 2).

The share of other products in the total remained unchanged.

Consumption of natural gas in Yugoslavia was limited to domestic production, which in 1981 totaled 2,230 million cubic meters, and imports of 2,102 million cubic meters. Thus total consumption was 4,299 million cubic meters, or 25 percent higher than in 1980.

	(u mil. m <sup>3</sup> )		
	1980.	1981.	Index 81/80
Proizvodnja (2)	1.859	2.230	121
Uvoz (3)	1.607	2.102	131
Ukupno (potrošnja) (4)	3.466	4.332	125

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Table 4. Nominal and Real Prices for Petroleum Products in Yugoslavia, 1973-1981

Prodajne cijene (a)	Prosječne nominalne cijene za (b) dinara/kilogram					Prosječne realne cijene za (c) dinara/kilogram*				
	1973.	1980.	1981.	Index 81/80	Index 81/73	1973.	1980.	1981.	Index 81/80	Index 81/73
1. Motorni benzini	4,30	23,84	34,94	147	812	19,31	30,75	43,94	113	181
2. Dizel goriva	2,01	16,04	23,52	147	1.170	9,02	20,69	23,52	114	260
3. Lož ulje ekstra lako	1,67	9,93	15,53	156	928	7,50	12,81	15,53	121	207
4. Lož ulje teško	0,69	4,62	8,03	174	1.164	3,09	5,96	8,03	135	260

\* NAPOMENA: Realne cijene izračunate na bazi 1981. = 100 prema kretanju cijena (Index 3/1982 SZS Beograd)

Indeksi cijena na malo 1981/1980. g. = 129

1981/1973. g. = 449

Key: a. Retail prices

b. Average nominal prices: dinar/kg

c. Average real prices, dinar/kg\*

1. Gasolines

2. Diesel fuels

3. Extra-light heating oil

4. Heavy heating oil

\*Note: Real prices are figures on the basis of 1981 = 100, according to fluctuations in prices as recorded in Index 3, 1982 Federal Statistical Office, Belgrade. The index of retail prices 1981/1980 = 129; for 1981/1973 = 449.

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